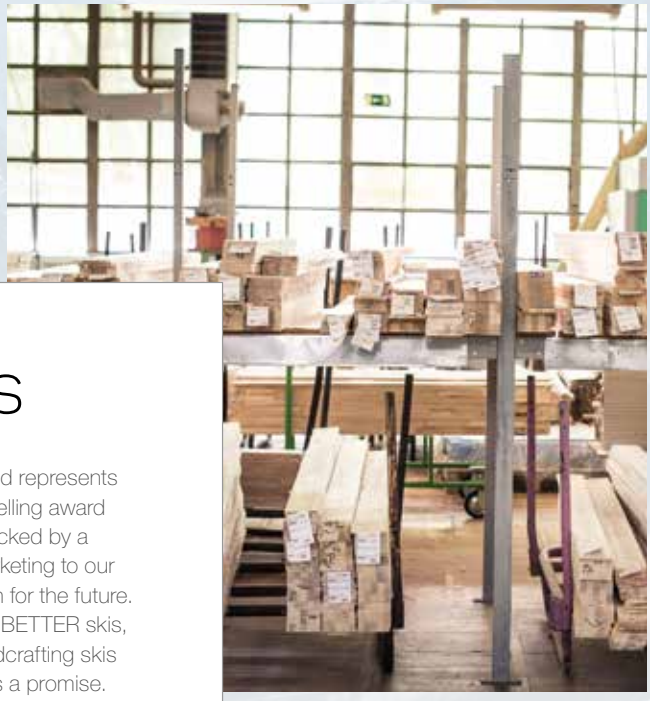
TECH MANUAL 2018/19

elan

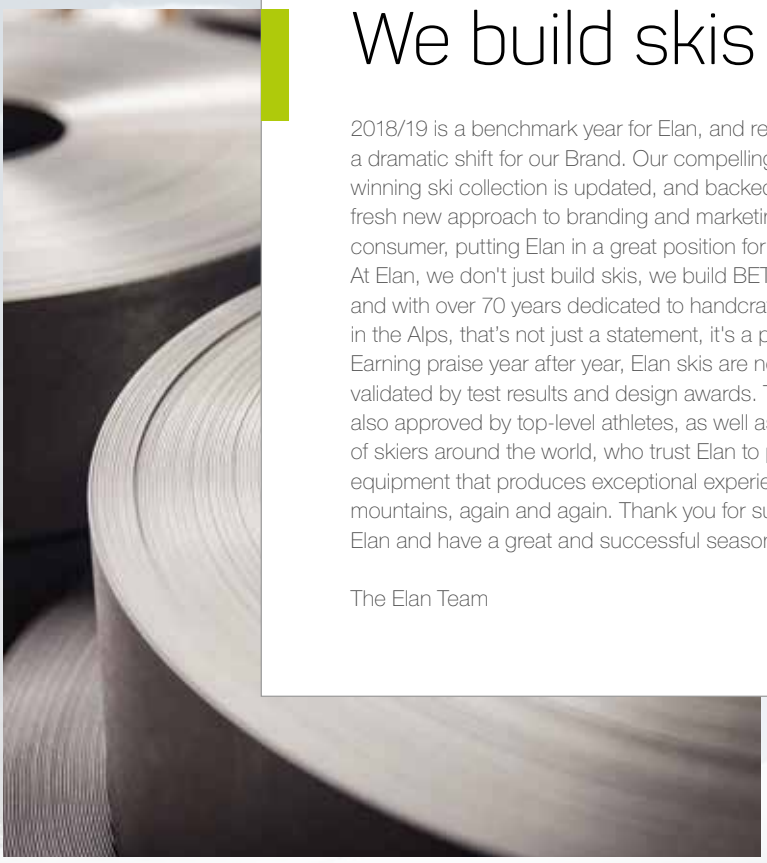
Always Good Times

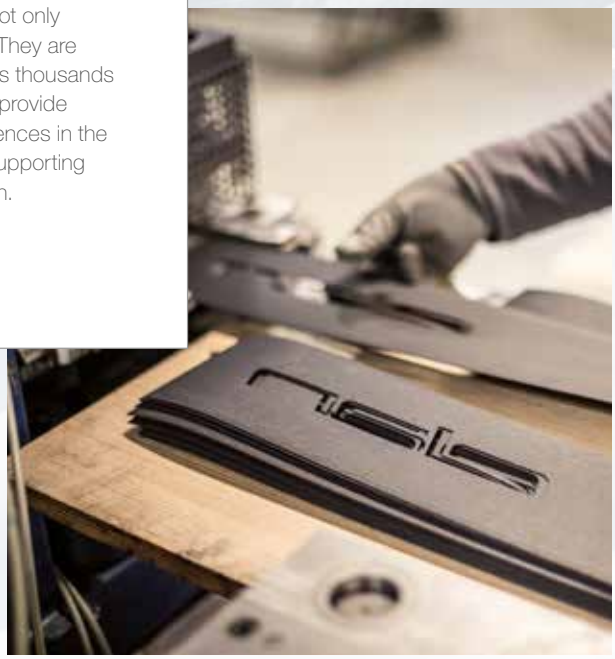


We build skis

2018/19 is a benchmark year for Elan, and represents a dramatic shift for our Brand. Our compelling award winning ski collection is updated, and backed by a fresh new approach to branding and marketing to our consumer, putting Elan in a great position for the future. At Elan, we don't just build skis, we build BETTER skis, and with over 70 years dedicated to handcrafting skis in the Alps, that's not just a statement, it's a promise. Earning praise year after year, Elan skis are not only validated by test results and design awards. They are also approved by top-level athletes, as well as thousands of skiers around the world, who trust Elan to provide equipment that produces exceptional experiences in the mountains, again and again. Thank you for supporting Elan and have a great and successful season.

The Elan Team





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ADJUSTMENT

MOUNTING BINDINGS & PLATES

DEALER SERVICE INFORMATION

BRAND

How?

100% handcrafted in the Alps
for more than 70 years,
ELAN is dedicated to innovation
that makes the skiing experience
better for everyone.

What?

We build better skis.
We live for the skiing lifestyle
and challenge ourselves
with new experiences.

Why?

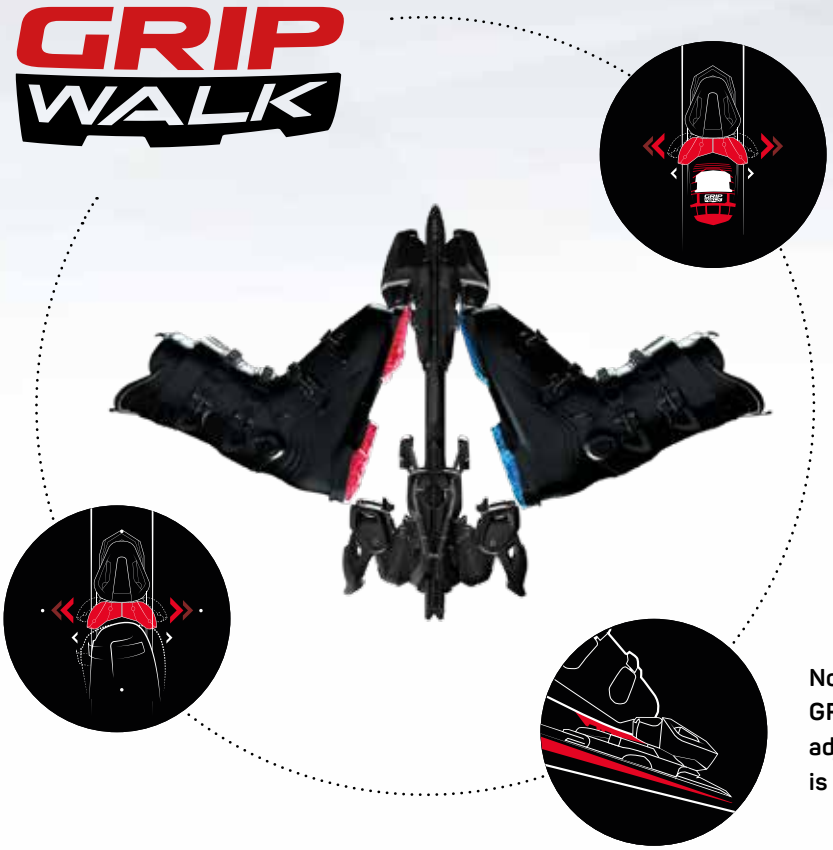
Whether you live in the city
or the mountains, ELAN believes
skiing should be experienced
by everyone.

BINDINGS

GRIP WALK

»Click click« is the only thing you want to hear from your bindings before letting yourself go on the slopes. Elan bindings collection is designed all around maximum performance and safety, so you can only focus on having fun!

You can GripWalk with Elan! The entire adult Fusion, Quick Trick, Shift and Rental bindings are fully GripWalk compatible and can be used with Alpine ski boots (ISO 5355) and GripWalk ski boots (ISO 9523).



Gripwalk bindings can be used for both – adult alpine and GRIPWALK ski boots.

Uncompromising skiing performance and safe release-retention settings with both ski boot sole types.

No specific GRIPWALK height adjustment is necessary.

elan	**ALPINE** SKI BOOTS (ISO 5355)		**TOURING** SKI BOOTS (ISO 9523)		
* marking can be found in the product name and partly also on the binding	TYPE **A** (Adult)	TYPE **A** (Children)	GripWalk **(GW)**	Walk Sole/ Walk to Ride **(W)**	**no further** indication
Binding without any indication*	●				
Binding marked "AC"	●	●			
Binding marked "GW"	●		●		
Binding marked "MBS"	●		●	●	
Binding marked "AT"	●		●	●	●

ELAN

AAA-SERIES

Only the most motivated athletes can leave the mainstream behind by pushing beyond their limits. We at ELAN would like to make this as exciting and easy as possible, while also ensuring everyone's safety. An ELAN ski binding is the result of more than 85 years of research and development. An evolved technology enriched by the experience of the world's top athletes who trust our bindings when they fly over cliffs, kickers and rails.

KEEPS YOU BRAVE.

The next level to Access All Areas is reached with the new AAAttack2 bindings. A new toe construction extends the possibilities of allmountain skiing.

Skiers prefer equipment which provides control, performance and usability. Not only for clear slopes and untracked powder areas, also for stoked park and half pipe rides. The ELAN AAAttack² reaches the next stage in combining functionality and modern design to meet these demands. A perfect tool for all-around skiers who are willing to attack!

The new FR PRO² Toe:

The new standard toe construction in the AAAttack² line – FR PRO² - is compatible with Alpine and GripWalk ski boots. The super secure 77mm metal Anti Friction Device – AFD Metal – can be adjusted to Alpine Boots (Type A ISO 5355) and GripWalk Boots.

GRIP WALK

AT

The FR PRO² AT Toe:

The AAAttack² 14 AT can be adjusted to Alpine (Type A ISO 5355) and GripWalk boots, but also up to Walk Sole, Walk To Ride and Touring ski boots (Type T ISO 9523).

Safety First

To increase the safety and performance aspect of the new AAAttack² bindings, a new release kinematic was developed to reduce friction and guarantee more constant release values. The interaction between the spring and the tension element is designed as a new system that significantly reduces friction, for even more precise and constant release values. Every toe piece is calibrated before packaging to ensure exact DIN settings.

AAAttack² AT DEMO models, modified versions of the AAAttack Freeski bindings, are the first demo freeski binding, suitable for rental, that are anchored on a metal toe track. This unique feature ensures a lower stand height, a more compact design and increased stability compared with other bindings.

AT

FR PRO² AT Toe:

The AAAttack² AT DEMO models can be adjusted to Alpine (Type A ISO 5355) and GripWalk boots, but also up to Walk Sole, Walk To Ride and Touring ski boots (Type T ISO 9523).
With these bindings, boot-binding compatibility issues during demos or rentals are relegated to the past.
To avoid displacements during handling of the skis, the length adjustment lever of the demo models is now better integrated.

The AAAttack² AT DEMO models provide a modified PowerRail track under the heel piece, making it easy to adjust manually.

Since this easy to adapt AAAttack² AT DEMO Freeski binding model was designed for a wide range of sole lengths, it can be adjusted to all available alpine boot sole lengths from 259 to 382 mm, tool-free in a matter of seconds, by moving the toe and heel pieces.

ATTACK²

	ISO 5355	TOURING - ISO 9523		
Line 2018/19	Alpine Adult (A)	GripWalk (GW)	Walk Sole Walk To Ride (W)	Touring (T)
AAATTACK² 18X AT	X	X	X	X
AAATTACK² 16 AT	X	X	X	X
AAATTACK² 13 AT	X	X	X	X
AAATTACK² 11 GW	X	X		
AAATTACK² 13 AT DEMO	X	X	X	X
AAATTACK² 11 AT DEMO	X	X	X	X

AT – Alpine Touring. Suitable for Alpine (ISO 5355) and Touring ski boots (ISO 9523), including GripWalk (GW), Walk Sole and Walk To Ride (W) ski boots

GW – GripWalk. Bindings marked with GW fit Alpine and GripWalk boot types

NOTES:

TECHNICAL INFORMATION

TECHNICAL INFORMATION

ELAN TECHNOLOGIES

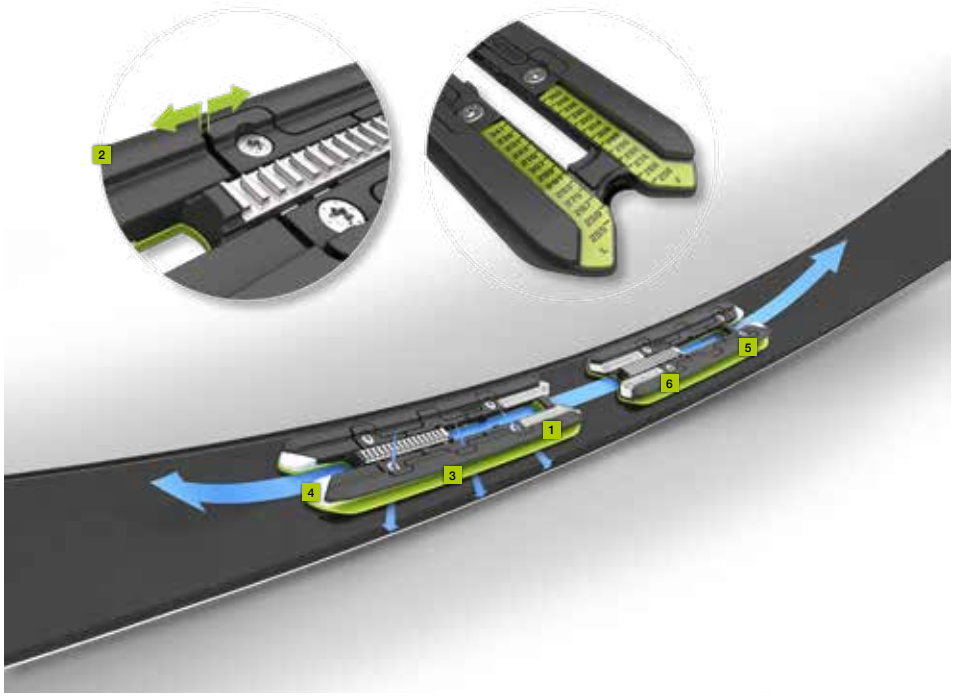
1. FUSION

The Fusion System is the world's first truly integrated ski binding system, paving the way for faster turn initiation, smoother flex and easier turning and enhanced edge-to-edge responsiveness.

The Fusion binding system now has an upgrade. Its features include easier handling with tool-less mounting and synchronous movement, better performance with freeflex under the binding and improved stability and a considerable 15% / minus 330 g weight reduction per ski. Designed by the acclaimed Porsche Design Studio, the upgraded Fusion got the look, too!

1. Click-in bindings
2. Central locking mechanism
3. Syncro movement
4. Stability
5. Freeflex
6. Wide binding hold

FUSION® SYSTEM



2. SHIFT

The Shift System is built with a lean profile comprised of lightweight materials, and designed to offer optimized performance.

The foundation of the Shift System is a plate-in-plate free flex design that allows the ski to bend along its length. Additionally, vibration absorbers dampen chatter between the ski and the plate, improving the connection between the skier's feet.

Wide ABS platform creates optimal power transfer further increasing precision and edge hold.

SHIFT SYSTEM

LIGHTWEIGHT

1 THIN PROFILE
Reduced weight due to construction.

PERFORMANCE

2 "PLATE-IN-PLATE" FREEFLEX CONSTRUCTION
A new solution, two plates that move freely. This technology has free flex and great power transfer at the same time.

3 POWER TRANSFER PLATFORM
Delivers optimal power transfer further increasing precision and edge hold.

4 VIBRATION ABSORBERS
Improve comfort and provide a smooth ride in any situation.

EASY HANDLING

5 ENHANCE GLIDING

6 TOOL FREE, CLICK IN BINDINGS

3. FREEFLEX EVO

Freeflex EVO reduces the impact on the natural flex of the ski to a minimum. The new construction of the roller pincer system and its wings guarantee utmost stability. The newly designed longer wings overlap better with the ski boot and hence in less forward pressure. ELAN developed an intelligent Race AFD gliding element which moves together with the ski flex enabling constant contact between boot and binding in all flex situations. The synchro adjustment of the wings provides precise adjustment to ski boot sole heights, preventing wobbling between binding and boot.

4. SUPERLITERAIL - SLR II

The SLR (SuperLiteRail) System is based on a new construction using highly valuable materials for improved weight distribution, lightweight design and it guarantees durability.

SUPERLITERAIL II – Bindings-Base System below 1700g! With the 2-piece SLR II base, weight was reduced significantly. Only 1680 grams per pair makes this adult system extraordinarily light for a DIN 9 binding, due to a base weight of only 280 g and a refined lighter binding construction with 1400g binding weight. The base offers 3 different mounting positions to cover boot sole lengths between 199 and 347 mm.

5. QUICKTRICK / POWERRAIL

The one-of-a-kind rail system developed by ELAN meets the demands of the adult skier market and is perfectly suited for both the retail and rental sectors! The PowerRail is a true success due to its great number of features: easiest handling, maximum flexibility, optimal performance, perfect matching, increased stability and durability. In addition, the toe and heel guides can be replaced or fitted to provide long-term performance.

Powerrail System is a modular system for maximum flexibility. Different bases - PowerRail PR and TWIN PR - can be combined with special dampeners in different widths and colors for optimal ski-fitting and furthermore different binding models (EL 11.0 MBS and EL 10.0) are available.

Mounting and adjusting of all rail bindings is extremely simple and without any additional tool: Open the toe/heel- lever and slide the toe/heel on the rail and lock at the appropriate boot sole length and close the lever – READY to GO!

6. RX/SX KINEMATICS

The RX and SX product lines were developed using kinematics based on laboratory measurements and tests. The advantages: enhanced performance and safety.

Considerably improved canting stability for better edge grip and faster edge to edge turns.

Horizontally – more stability for more direct power transmission from boot to edge.

Vertically – whether it is iced up, dirty or worn, the boot is always precisely secure due to the linear adaptation to the height of the ski boot sole. This ensures precise and powerful turns.

TECHNICAL INFORMATION

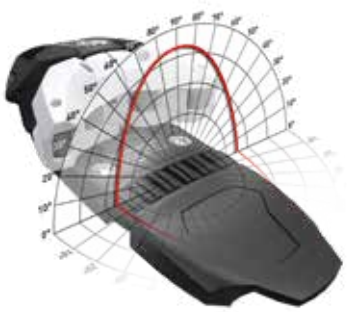
SAFETY FEATURES

ONLY PERFECTION PROVIDES SAFETY

A special dedication to Active Safety is a core value at ELAN. Unique safety features, such as the exclusive ABS band and Diagonal Heel offer optimal protection for every skier.

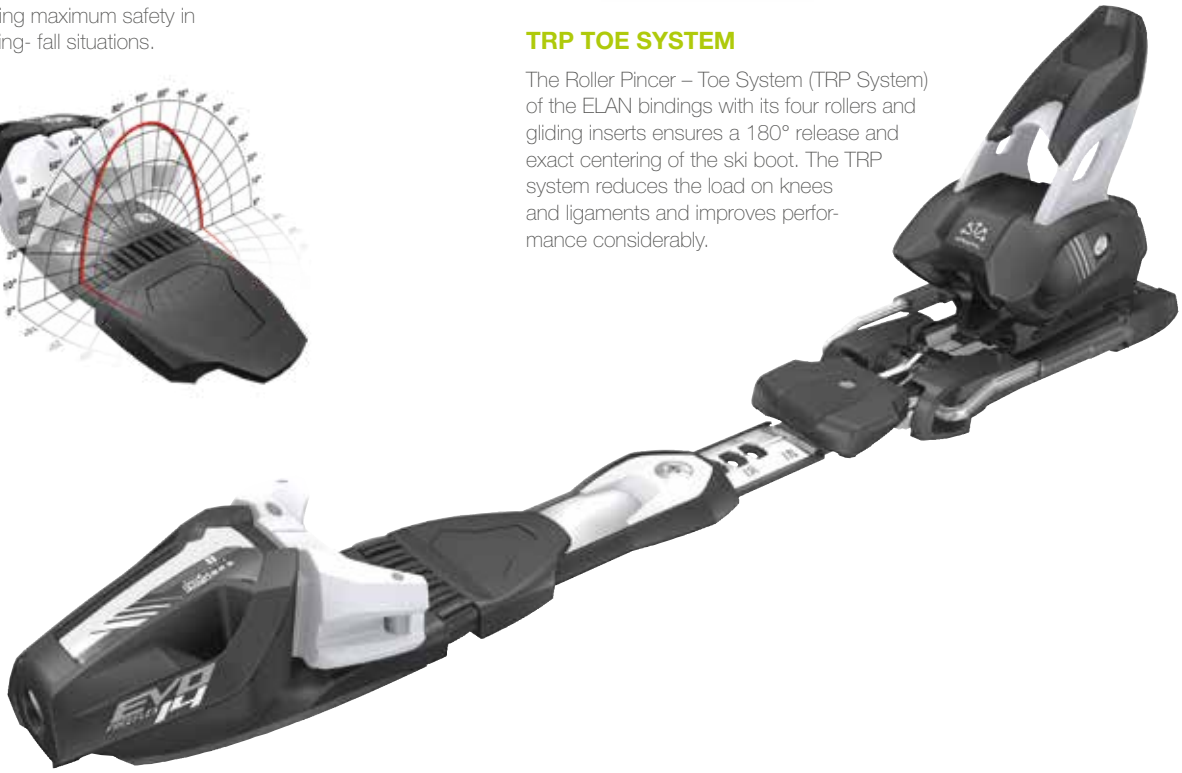
FULL DIAGONAL – TOE (RX Toe)

The new RX Toe features more than improved aerodynamics. The Full Diagonal Release function delivers intelligent 180° release both horizontally and vertically – therefore ensuring maximum safety in backward twisting- fall situations.



TRP TOE SYSTEM

The Roller Pincer – Toe System (TRP System) of the ELAN bindings with its four rollers and gliding inserts ensures a 180° release and exact centering of the ski boot. The TRP system reduces the load on knees and ligaments and improves performance considerably.



ABS – ANTI BLOCKING SYSTEM

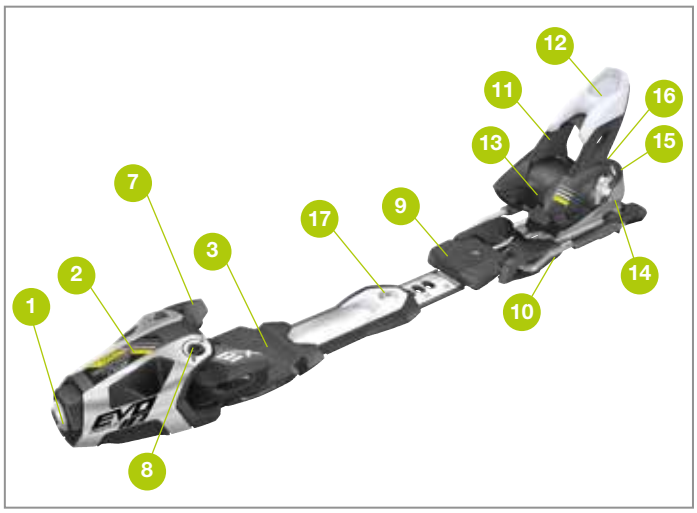
The exclusive technology of the ABS continuous band allows the boot to move out of the binding almost without any friction, hence delivering maximum safety in case of icing up, dirt and boot wear.

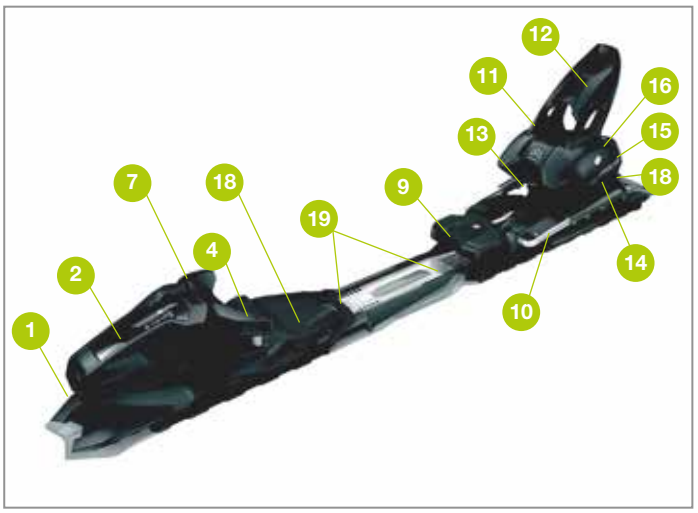
FREEFLEX PRO

Optimal performance through the innovative Freeflex Pro System. The free-gliding heel allows the ski to bend through unimpeded and to retain its natural dynamics. Due to the reduced stand height, the Freeflex band is now much closer to the ski boot. Constant release values reduce the risk of injury and ensure safe turns.

NOTES:

REFERENCE PARTS - RETAIL





TOE PIECE

1. Adjustment screw
2. Visual indicator
3. Race AFD
4. GripWalk - AFS
5. AFS/AFS Jun.
6. Teflon AFD
7. Wings
8. Adjustment screw - sole height

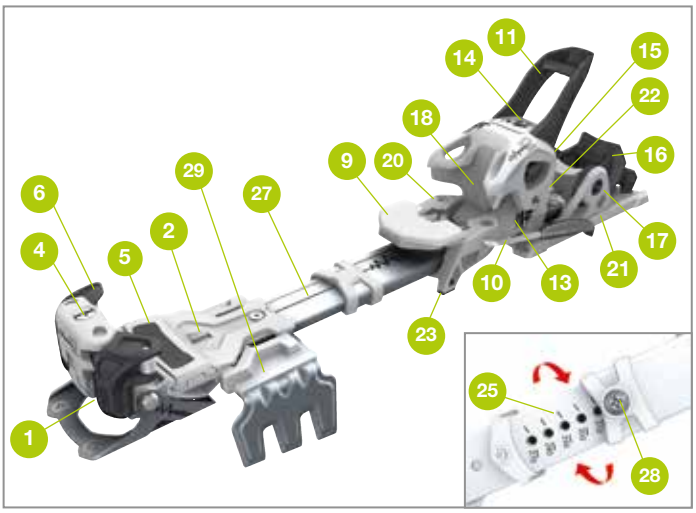
HEEL PIECE

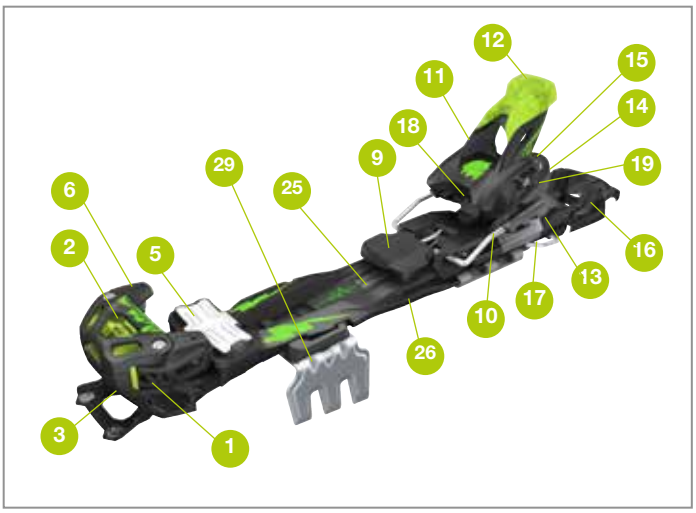
9. Brake pedal
10. Brake arms
11. Heel lever
12. Heel cover
13. Sole lug
14. Heel housing
15. Adjustment screw
16. Visual indicator

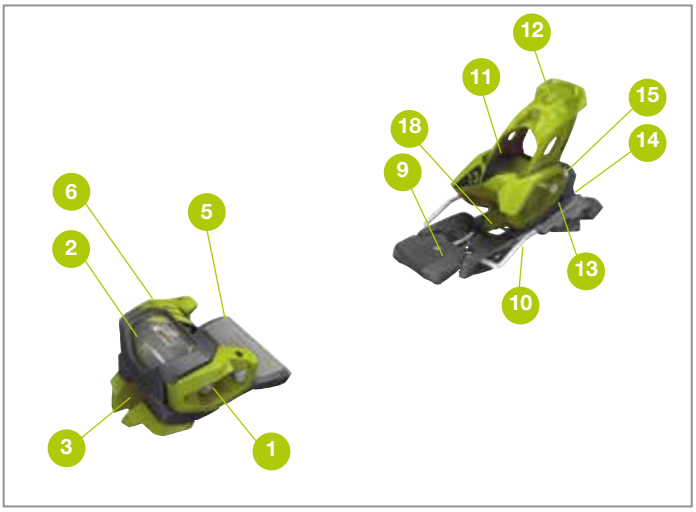
MID PARTS

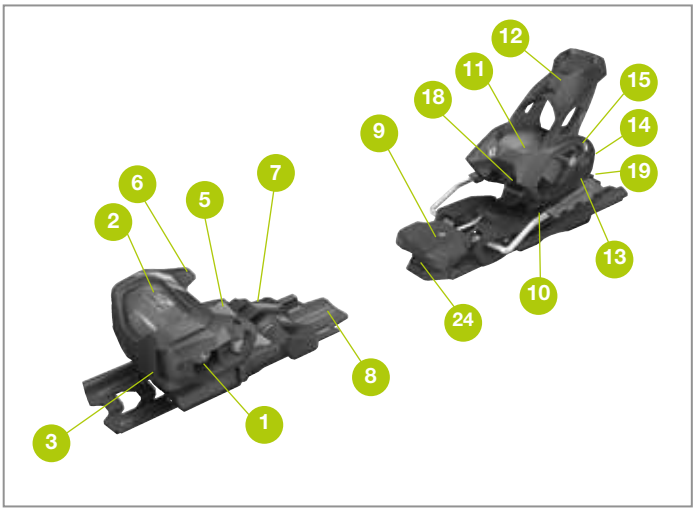
17. Freeflex PRO
18. PR lever
19. PR scale
20. SLR lever
21. SLR scale

REFERENCE PARTS - AAA-SERIES









TOE PIECE

1. Adjustment screw
2. Visual indicator
3. Adjustment screw - AFS/AFD
4. Adjustment screw - sole height
5. AFS/AFD
6. Wings
7. Toe lever
8. Attack Demo scale

HEEL PIECE

9. Brake pedal
10. Brake arms
11. Heel lever
12. Heel cover
13. Heel housing
14. Adjustment screw
15. Visual indicator
16. Ascender look
17. Climbing aid
18. Sole lug
19. Heel adjustment lever
20. Heel base plate
21. Demo Track
22. Length ajustment screw
23. Dampener
24. Attack Demo scale

MID PARTS

25. Boot sole length scale
26. Walking platform
27. Telescopic tube
28. Length adjustment screw
29. Crampon

TECHNICAL INFORMATION

ELAN BINDING LINE 2018/19

Model	Ramp angle	Z - DIN	kg	lbs	Set-Weight [g]	Drill Template	Feature	Type	System	
RACE										
ER 20.0 X FREEFLEX EVO RD BRAKE 85 [A]	3,5	10-20	from 97	from 209	3190	92 W / 92 FAT	FREEFLEX Pro	RACE	---	
ER 16.0 X FREEFLEX EVO RD BRAKE 85 [A]	3,5	8-16	from 79	from 175	3170	92 W / 92 FAT	FREEFLEX Pro	RACE	---	
ER 17.0 FREEFLEX EVO BRAKE 85 [A]	4,5	6 - 17	from 58	from 126	2690	92 W / 92 FAT	FREEFLEX Pro	RACE	---	
ER 14.0 FREEFLEX EVO BRAKE 85 [D]	7,0	4-14	from 42	from 92	2260	92 W / 92 FAT	FREEFLEX Pro	RX	Full Diagonal	
ER 11.0 FREEFLEX EVO BRAKE 85 [D]	7,0	3-11	from 31	from 67	2260	92 W / 92 FAT	FREEFLEX Pro	RX	Full Diagonal	
ER 11.0 BRAKE 85 [D]	3,5	3-11	from 31	from 67	1920	92 W / 92 FAT	---	RX	Full Diagonal	
FUSION										
ELX 14.0 GW Fusion BRAKE 85 [F]	5,5	4-14	from 42	from 92	1970	---	Fusion4	RX	Full Diagonal	
ELX 12.0 GW Fusion BRAKE 85 [F]	5,5	3,5-12	from 36	from 79	1970	---	Fusion4	RX	Full Diagonal	
ELX 12.0 GW Fusion BRAKE 95 [F]	5,5	3,5-12	from 36	from 79	1970	---	Fusion4	RX	Full Diagonal	
ELX 11.0 GW Fusion BRAKE 85 [F]	5,5	3-11	from 31	from 67	1960	---	Fusion4	SX	Full Diagonal	
EL 11.0 GW Fusion BRAKE 85 [G]	3,0	3-11	from 31	from 67	1790	---	Fusion4	SX	Full Diagonal	
QUICK TRICK (POWERRAIL)										
EL 10.0 GW QUICK TRICK BRAKE 85 [G]	3,0	3-10	from 31	from 67	1790	Bases & Plates	Powerrail	SX	Full Diagonal	
AAA-SERIES										
ATTACK² 18.0 X AT W/O BRAKE [A]	2-7	8-18	from 79	from 175	2290 (2590)	92 W / 92 FAT	---	FR PRO² AT	---	
ATTACK² 13 AT W/O BRAKE [A]	2-7	4-13	from 42	from 92	1930 (2230)	92 W / 92 FAT	---	FR PRO² AT	---	
ATTACK² 11 GW W/O BRAKE [L]	6-9	3-11	from 31	from 67	1550 (1800)	92 W / 92 FAT	---	FR PRO²	---	
AMBITION 12 AT W/O BRAKE [C]	3 (*6)	4-12	from 26	from 57	1810 (1980)	Ambition	Telescopic tube	AT	-	

Toe				Heel						Boot sole	
	AFD	Stand Height [mm]	Length Adj. Range [mm]	Type	Heel System	Brake	Brake Code	Stand Height [mm]	Length Adj. Range [mm]	Length [mm]	DIN/ISO Standard
	Race AFD (X)	12,5	---	RACE PRO (spindle)	Standard	PB² Race Pro 16-85	A	16,0	32	255 - 375	A
	Race AFD (X)	12,5	---	RACE PRO (spindle)	Standard	PB² Race Pro 16-85	A	16,0	32	255 - 375	A
	Race AFD	12,5	---	RACE PRO	Standard	PB² Race Pro 17-85	A	17,0	32	255 - 375	A
	ABS	14,0	---	Race Lite	Standard	Power Brake² LD 85	D	21,0	24	255 - 375	A
	ABS	14,0	---	Race Lite	Standard	Power Brake² LD 85	D	21,0	24	255 - 375	A
	ABS	17,0	---	Race Lite	Standard	Power Brake² LD 85	D	21,0	24		A
	AFS_GW	33,5	57,5	NX	Standard	Powerrail Brake² LD 85	F	33,5	57,5	265-384	A / G
	AFS_GW	33,5	57,5	NX	Standard	Powerrail Brake² LD 85	F	33,5	57,5	265-384	A / G
	AFS_GW	33,5	57,5	NX	Standard	Powerrail Brake² LD 95	F	33,5	57,5	265-384	A / G
	AFS_GW	33,5	57,5	NX	Standard	Powerrail Brake² LD 85	F	33,5	57,5	265-384	A / G
	AFS_GW	31	57,5	SXG	Standard	Powerrail Brake SL 85	G	31	57,5	265-384	A / G
	AFS_GW	28	60	SXG	Standard	Powerrail Brake SL 85	G	31	60	255 - 378	A / G
	AFS metal	17-22	---	RACE PRO FR	Standard	w/o Brake	A	24,0	32		A / G / W / T
	AFS metal	17-22	---	NX FR	Standard	w/o Brake	A	24,0	32		A / G / W / T
	AFD metal	12-15	---	SX FR	Standard	w/o Brake	L	21,0	32		A / G
	AFS	35,0	---	AT	Standard	w/o Brake	C	38 (*41)	14	260-350	A / G / W / T

A... Alpine Adults, C... Alpine Children, G... GripWalk, W... Walk Sole and Walk To Ride, T... Touring

Model	Ramp angle	Z - DIN	kg	lbs	Set-Weight [g]	Drill Template	Feature	System		AFD
SHIFT (SLR)										
ELX 11.0 GW SHIFT Brake 85 [H]	2,0	3-11	from 31	from 67	1800	SLR & LR	SLR	Full Diagonal		AFS_GW
ELS 11.0 GW SHIFT BRAKE 85 [H]	2,0	3-11	from 31	from 67	1650	SLR & LR	SLR	Full Diagonal		AFS_GW
ELS 11.0 GW SHIFT BRAKE 90 [H]	2,0	3-11	from 31	from 67	1650	SLR & LR	SLR	Full Diagonal		AFS_GW
EL 10.0 GW SHIFT BRAKE 85 [H]	2,0	3-10	from 31	from 67	1640	SLR & LR	SLR	Full Diagonal		AFS_GW
EL 10.0 GW SHIFT BRAKE 90 [H]	2,0	3-10	from 31	from 67	1640	SLR & LR	SLR	Full Diagonal		AFS_GW
EL 9.0 GW SHIFT BRAKE 85 [H]	2,0	2,5-9	from 26	from 57	1420	SLR & LR	SLR	Full Diagonal		AFS_GW
ELW 11.0 GW SHIFT BRAKE 85 [H]	2,0	3-11	from 31	from 67	1800	SLR & LR	SLR	Full Diagonal		AFS_GW
ELW 10.0 GW SHIFT BRAKE 85 [H]	2,0	3-10	from 31	from 67	1640	SLR & LR	SLR	Full Diagonal		AFS GW.
ELW 9.0 GW SHIFT BRAKE 85 [H]	2,0	2,5-9	from 26	from 57	1420	SLR & LR	SLR	Full Diagonal		AFS_GW
EL 7.5 AC SHIFT BRAKE 78 [H]	5,5	2-7,5	22-84	48-187	1360	SLR & LR	SLR	Full Diagonal		AFS Jr.
EL 7.5 AC SHIFT BRAKE 90 [H]	5,5	2-7,5	22-84	48-187	1360	SLR & LR	SLR	Full Diagonal		AFS Jr.
EL 4.5 AC SHIFT BRAKE 74 [I]	5,5	0,75-4,5	10-48	22-105	1250	SLR & LR	SLR	Full Diagonal		AFS Jr.
EL 4.5 AC SHIFT BRAKE 84 [I]	5,5	0,75-4,5	10-48	22-105	1250	SLR & LR	SLR	Full Diagonal		AFS Jr.
SET										
EL 10.0 BRAKE 78 [E]	9,0	3-10	from 31	from 67	1620	92 W / 92 FAT	---	Full Diagonal		Teflon
EL 10.0 BRAKE 90 [E]	9,0	3-10	from 31	from 67	1620	92 W / 92 FAT	---	Full Diagonal		Teflon
JUNIOR										
EL 7.5 AC BRAKE 78 [J]	9,0	2-7,5	22-84	48-187	1400	92 W / 92 FAT		Full Diagonal		AFS Jr.
EL 4.5 AC BRAKE 74 [K]	3,0	0,75-4,5	10-48	22-105	1190	94 W		Full Diagonal		AFS Jr.

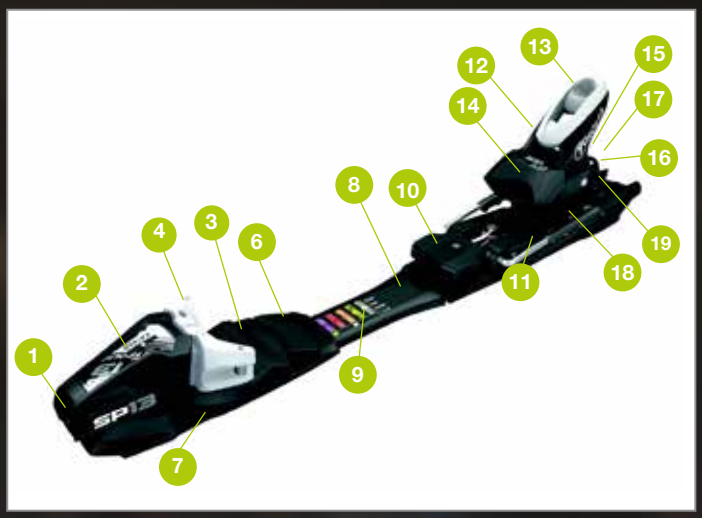
		Heel						Boot Sole	
Stand Height [mm]	Length Adj. Range [mm]	Type	Heel System	Brake	Brake Code	Stand Height [mm]	Length Adj. Range [mm]	Length [mm]	DIN/ISO Standard
26	40	NX	Standard	SL Brake LR 85	H	28,0	40	255-338	A / G
26	40	SXG	Standard	SL Brake LR 85	H	28,0	40	255-338	A / G
26	40	SXG	Standard	SL Brake LR 90	H	28,0	40	255-338	A / G
26	40	SXG	Standard	SL Brake LR 85	H	28,0	40	S:199 - 283/ M:239 - 323/ L:263 - 347	A / G
26	40	SXG	Standard	SL Brake LR 90	H	28,0	40	S:199 - 283/ M:239 - 323/ L:263 - 347	A / G
26	40	SXG Lite	Standard	SL Brake LR 85	H	28,0	40	S:199 - 283/ M:239 - 323/ L:263 - 347	A / G
26	40	NX	Standard	SL Brake LR 85	H	28,0	40	255-338	A / G
26	40	SXG	Standard	SL Brake LR 85	H	28,0	40	S:199 - 283/ M:239 - 323/ L:263 - 347	A / G
26	40	SXG Lite	Standard	SL Brake LR 85	H	28,0	40	S:199 - 283/ M:239 - 323/ L:263 - 347	A / G
21,5	40	SX Jr.	Standard	SL Brake LR 78	H	27,0	40	S:199 - 283/ M:239 - 323/ L:263 - 347	A / C
21,5	40	SX Jr.	Standard	SL Brake LR 90	H	27,0	40	S:199 - 283/ M:239 - 323/ L:263 - 347	A / C
21,5	40	SX Kid	Standard	SX Kid Brake LR 74	I	27,0	40	S:199 - 283/ M:239 - 323/ L:263 - 347	A / C
21,5	40	SX Kid	Standard	SX Kid Brake LR 84	I	27,0	40	S:199 - 283/ M:239 - 323/ L:263 - 347	A / C
12	-	EL	Standard	SL Brake 78	J	21,0	32 (-8/+24)		A
12	-	EL	Standard	SL Brake 90	J	21,0	32 (-8/+24)		A
12	---	SX Jr.	Standard	SL Brake 78	J	21,0	32 (-8/+24)		A / C
12	---	SX Kid	Standard	SX Kid Brake 74	K	15,0	44		A / C

A... Alpine Adults, C... Alpine Children, G... GripWalk, W... Walk Sole and Walk To Ride, T... Touring

TECHNICAL INFORMATION
RENTAL

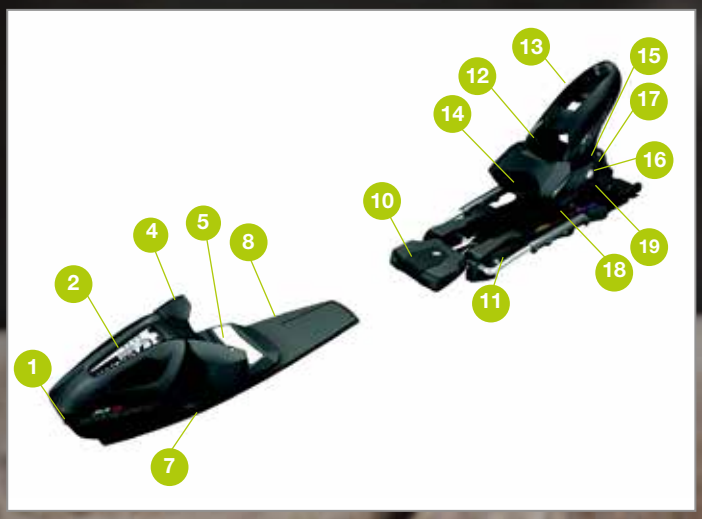
FOR ALL INTENTS AND PURPOSES OF DAILY USE ON SNOW
We equipped all Rental bindings with the NeXt kinematic toes and heels to ensure the latest kinematic improvements are protecting rental skiers as well. Special features make the ELAN Rental bindings extremely long lasting and especially durable, but at the same time easier to handle – ideally suited for long-term use and abuse in the rental sector.

REFERENCE CHART - RENTAL



TOE PIECE

1. Adjustment screw
2. Visual indicator
3. AFS GW
4. Wings
5. AFD Teflon
6. One Touch lever
7. Base plate
8. Bar code area
9. Single code scale



HEEL PIECE

10. Brake pedal
11. Brake arms
12. Heel lever
13. Heel cover
14. Sole lug
15. Visual indicator
16. Heel housing
17. Adjustment screw
18. Single code scale
19. One touch lever

TECHNICAL INFORMATION

RENTAL TECHNOLOGY

ATTACK² AT 11/13 DEMO

The next generation of Attack² AT DEMO models (Attack² AT DEMO 13 and Attack² AT DEMO 11) can be adjusted to Alpine (ISO 5355) and Touring ski boots (ISO 9523), including GripWalk, Walk Sole and Walk To Ride ski boots. With these bindings, boot-binding compatibility issues during demos or rentals are relegated to the past. The length adjustment lever is now more integrated in order to avoid displacements during handling of the skis.

RENT HEEL AND RX/SX TOE

The Rent heel features improved ergonomics, resistance and better protection against abrasion plus an optimized scale window – thus combining visual quality with safety and stability. Most of the Rental binding models are equipped with the RX and SX toes with improved kinematics, and the proven Rent One Touch system optimized and much appreciated for rental purposes.

ONE TOUCH SYSTEM

The innovative One Touch System used for the ELAN Rental bindings ensures the simplest possible operation and length adjustment of toes and heels. Because – especially in the Rental sector – time is also money!

SINGLE CODE

The Single Code guarantees that rental agreements are processed in record time. There is only one unit of size in the form of clearly color coded letters. This enables toe, heel and boot to be adjusted very quickly so that more customers can be served in lesstime.

SYMPRO SYSTEM

With the Rental Sympro, the length of the toe and heel can be adjusted with only a few easy steps for fast on-hill adjustment. The SP Rental bindings are suitable for any ski without an integrated system.

SYMRENT SYSTEM

With a mobile heel that can be simply and very quickly adjusted to almost any size of boot, this binding is ideal for mounting on any rental ski.

GRIPWALK COMPATIBILITY

Fast on hill adjustments of toe and heel piece, high durability for long lasting rental performance and single code scale for easiest adaptation of the boot-binding system are now completed with an increased compatibilty of ski boot sole standards. The new ESP 10.0 GW and ESP 10.0 GW TRACK models are compatible with Alpine Adult (ISO 5355) and GripWalk (ISO 9523) ski boots.

TECHNICAL INFORMATION

SYMPRO - ESP / SYMRENT - ESR 18.19

Performance, for a rental binding, is not only what happens on the hill. A key measure of a product's quality is the ease with which a system can be adjusted and maintained throughout the course of many seasons.

THE SHOP FRIENDLY RENTAL DESIGN FEATURES:

- Easy mounting: This means fewer mistakes and reduced set-up time.
- Easy pre-season testing, low drop-out rate. The automatic sole lug design and the precise centering of the toe pincer system mean: fewer correction factors will be needed and less time spent testing.
- The SINGLE CODE system gives you a super fast option for binding-to-boot adjustment: set the heel length using the special sole length scale. Forward pressure will be right on, first time, every time.
- All models have automatic lug height adjustment which accommodate standard differences in boot sole-height.
- Easy, hand- levered "ONE TOUCH"- set up. One tool adjustment, easy to turn adjustment screw, "easy-in" boot feature.
- Almost maintenance-free, easy to change the AFD, clean and lubricate the heel track. ELAN made the commitment to offer a comprehensive product and service program.

THE RENTAL BINDINGS

No single rental binding can ever fulfill all the needs of all types of shops. We therefore offer the following line up of rental/demo models.

SYMPRO:

THE BINDINGS THAT HELP YOUR HIGH PERFORMANCE SKI SET-UP:

ESP 10.0 GW
ESP 10.0 GW TRACK

- Hand lever-adjusted heel (60 mm) and toe (64 mm)
- 7-toe positions
- DIN-ranges from 2.5 up to 13 that accommodate even high level skiers
- Short, lightweight heel track, despite wide adjustment range
- SINGLE CODE: "A-6" for ski boots from 263-391 mm sole length
- Replaceable brake
- Diagonal toe
- Optimal for Carving skis, minimized deviation between ski and boot mounting point
- Fully GripWalk compatible - no further height adjustment necessary

ESP 7.5 AC
ESP 4.5 AC

A child and junior model, super convenient, "parent-free" operation.

- Automatic toe and heel pieces accept child and adult boot sole dimensions, giving you full utilization of your child/junior ski inventory
- SINGLE CODE
  - "a–H" for ski boots from 191-294 mm sole length (ESP 4.5 AC) and
  - "f–U" for ski boots from 215-343 mm sole length (ESP 7.5 AC)

  The Single Code in lowercase letter refers to children's boots, whereas with capital letter to type A boots (Adult)
- „ONE TOUCH" hand lever adjustment for toe and heel
- Replaceable brake
- Diagonal toe.
- For skis, groups G3 & G4
- DIN range 0.75 up to 7.5

SYMRENT:

ESR 10.0

A technically proven workhorse for the discerning skier who rents

- DIN range of 2.5 up to 10
- Diagonal toe
- Large 84 mm heel adjustment range
- SINGLE CODE "A-V"
- Automatic toe and heel height adjustment
- "ONE TOUCH"- Hand lever adjustment for the heel
- Replaceable brake

NOTES:

ELAN RENTAL LINE 2018/19

Model	Ramp angle	Z - DIN	kg	lbs	Set-Weight [g]	Drill Template	Feature	Type	System	
RENTAL										
ESP 10.0 GW W/O Brake [D]	5,0	2,5-10	from 31	from 67	2580	SP 2003 W/ SP 2003 FAT yellow bushings	SYMPRO	SX	Full Diagonal	
ESP 10.0 GW Track PM	5,0	2,5-10	from 31	from 67	2580	SP 2003 W/ SP 2003 FAT yellow bushings	SYMPRO	SX	Full Diagonal	
ESP 7.5 AC Track PM	5,0	1,5-7,5	18-84	39-187	1440/2420	SP 2003 W / SP 2003 FAT white bushings	SYMPRO	SX Jr.	Full Diagonal	
ESP 4.5 AC BRAKE 74 [K]	1,0	0,75-4,5	10-48	22-105	1630	SP 2003 W / SP 2003 FAT red bushings	SYMPRO	SX Kid	Full Diagonal	
ESP 4.5 AC Track PM	1,0	0,75-4,5	10-48	22-105	1040/1630	SP 2003 W / SP 2003 FAT red bushings	SYMPRO	SX Kid	Full Diagonal	
ESR 10.0 BRAKE 85 [D]	6,5	2,5-10	from 26	from 57	2140	SR 2003 W yellow arrow	SYMRENT	SX	Full Diagonal	
ATTACK² 13 AT DEMO W/O BRAKE [F]	3-7	4-13	from 26	from 57	2250 (2550)	92 W / 92 FAT	ATTACK DEMO PR	FR PRO² AT	---	
ATTACK² 11 AT DEMO W/O BRAKE [G]	0,5-4,5	3-11	from 31	from 67	2130 (2430)	92 W / 92 FAT	ATTACK DEMO PR	FR PRO² AT	---	

Toe				Heel						Boot Sole	
	AFD	Stand Height [mm]	Length Adj. Range [mm]	Type	Heel System	Brake	Brake Code	Stand Height [mm]	Length Adj. Range [mm]	Length [mm]	DIN/ISO Standard
	AFS_GW	26	64	NX	Rental	w/o Brake	D	31,0	60	263 - 391	A / G
	AFS_GW	26	64	NX	Rental	w/o Brake	D	31,0	60	263 - 391	A / G
	AFS Jr.	26	64	NX Jr.	Rental	w/o Brake	D	31,0	60	215 - 343	A / C
	AFS Jr.	24	48	SX Kid	Rental	SX Kid Brake 74	K	25,0	52	191 - 294	A / C
	AFS Jr.	24	48	SX Kid	Rental	w/o Brake	K	25,0	52	191 - 294	A / C
	Teflon	15,5	-	NX	Rental	Power Brake² LD 85	D	22,0	84	263 - 351	A
	AFS metal	25-29	60	NX FR	Standard	w/o Brake	F	29,5	60	259-382	A / G / W / T
	AFS metal	25-29	60	SX FR	Standard	w/o Brake	G	29,5	60	259-382	A / G / W / T

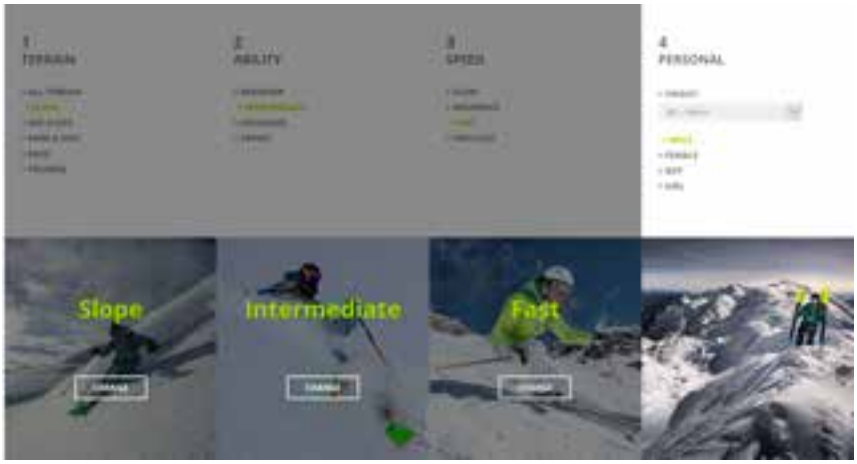
A... Alpine Adults, C... Alpine Children, G... GripWalk, W... Walk Sole and Walk To Ride, T... Touring

DEALER ONLINE SUPPORT

A fresh new look – the redesigned ELAN website has a great modern vibe, a perfect match for our innovative products and our skiers' desire to Access All Areas. With interactive and user-friendly features and tons of useful information, the site offers you the top online service for dealers, ski manufacturers as well as consumers.

WWW.ELANSKIS.COM

It is the perfect gathering place for everyone interested in the ELAN binding collection, finding out more about their technical innovations or about the company itself and and the ELAN history and milestones! The common thread is a desire to **Access All Areas** of any mountain!



SKI SELECTOR

The Ski Selector is designed to make the ski choice as easy as possible. Just follow four simple steps to find the right ski for you! You can find the Ski Selector on www.elanskis.com.

CALCULATOR APP

The Calculator App is designed to make the DIN setting process as easy as possible. You will find the app for your operating system in the appropriate App Store for IOS or Android. Search for HEAD Tyrolia Calculator, accept the terms and start the download. Use din_setting as the unlock code for installation.

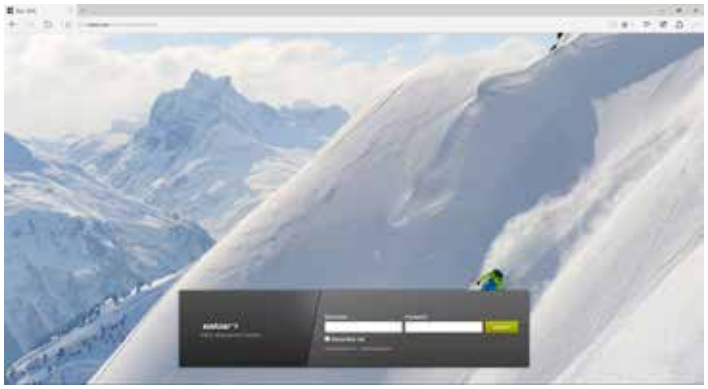
Only certified ELAN ski mechanics are allowed to use this application. It is for information purposes only and may not be forwarded or offered to others.

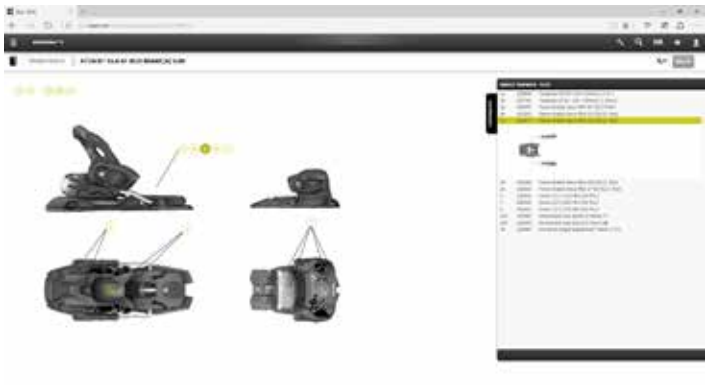
After downloading the App to your mobile device, enter all the required information and the appropriate DIN setting will appear on your smartphone screen.

JUST ONE CLICK

SEARCHING FOR SPARE PARTS AND TECHNICAL DATA AS SIMPLE AS POSSIBLE

The new OMS Spare Part Management (on line WEB access) offers all relevant information about ski bindings, technical data and their (spare) parts at a glance – and just one click away. Extensive information is available via the new OMS spare part system: Starting with the appropriate drill template right up to screws and spare parts related to a specific binding model; for example different brake types – plus, all parts can be directly identified by model. Pictures and colored marks provide simple navigation tools and easy recognition of selected parts.





LOGIN

Run your browser, type in address field **http://ELAN.head.com** and you are ready to go… Pages are protected! To access type:
User name: spare_ELAN
Password: omsnew
You can download complete User Manual from web page http://b2b.elanskis.com/

TWO DIFFERENT MODES

You may navigate through the Spare Parts OMS via two different modes:
1. Product view mode
2. Spare Part view mode
With the product view, all existing spare parts related to a specific binding model can be identified. In the spare part view, all spare parts are listed with their designated use.

SPARE PART VIEWER

The Spare Part Viewer explains all spare parts in detail (text and pictures) and shows the appropriate article number, description and order quantity. Colored bars and marks of the requested part make navigation extremely simple and easy.

TECHNICAL DATA

In the “product view” mode, technical data is available as additional information. You may access this data by clicking on the spanner symbol. You will find this symbol in the spread-sheet between the picture preview symbol and the symbol which opens the spare part viewer (the toothed wheel symbol). You can access the technical data sheet of one specific binding model, or open the technical data catalogue for all models per line and season.

Technical Data for all ELAN lines from season 2009/2010 up to the current line is available online.

ONLINE HELP

A HELP Document is also available online. You will find it in the OMS in the top right corner.

ELAN BRAKE LINE 2018/19

1. Power Brake² for [A],[B],[D] and [F]

ELAN introduced the Power Brake² with a better retraction up to 30 mm in comparison to former brakes. These brakes retract completely to the heel housing. ELAN reduces the amount of brake models in PB segments [A],[B],[D] and [F] due to new width split – 85/95/110/130/150 (from 26 to 19 models). Power Brake² features fully compatibility – new brakes match with old bindings and old brakes match with new bindings

2. IDENTIFICATION AND NAMING SYSTEM

To make the brake–binding allocation as easy as possile, we are using a color coding system. In addition to the standard product labels of the spare brakes, a color-letter code is affixed on the brake boxes (single and master packaging).

All bindings packaged without brakes will come with a similar sticker. Matching brakes and bindings has become fast and easy. For a binding with a red sticker [A], the dealer just has to look for a brake with a red sticker [A] in the proper width. The segmentation and colorcoding system can be found in the ELAN brake line on the next page.

Also the nomenclature of all ELAN brakes is standardized and includes all basic information. These nomenclature consist of a clear name, a number, what defines the maximum ski width at the mounting point and a letter, what specifies the brake cluster.

3. STANDARDIZATION OF BRAKE GROUP [E] AND [J]

ELAN made a standardization of the former Brake group [E] and [J]. That means, these 2 groups will be combined in the new group [E], [J] in the first step and after existing stock is delivered the [E] will be deleted completely from our brake line (running change).

Following changes are already done:

- No further production of all brakes in group [E]
- 2 new Brakes in group [J] with width of 100mm (163067) and 115mm (163068) will be added
- 162764 SL Junior Brake 72 [J] was replaced by the 163058 SL Junior Brake 78 [J]

Adaption of the name:

- "Junior" will be deleted from the name
- New group- name will be "SL Brake XX [E],[J]"
- New sticker for [E] or [J] brakes

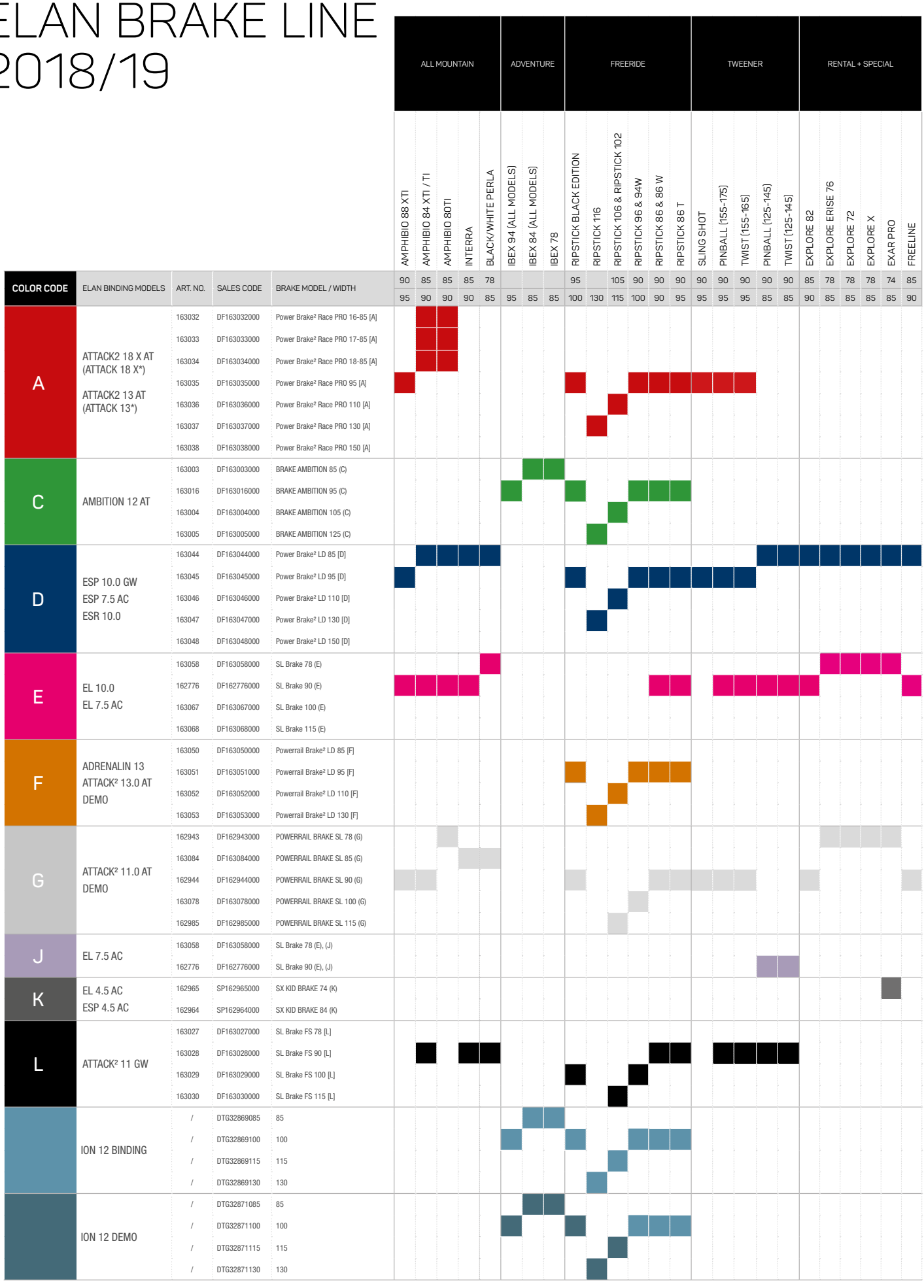
Brake Code	old		Step 1		Final	
	A.No.	Brake name	A.No.	Brake name	A.No.	Brake name
E	162642	SL Brake 78 [E]	---	-----	---	-----
	162755	SL Brake 90 [E]	---	-----	---	-----
	163017	SL Brake 100 [E]	---	-----	---	-----
	162939	SL Brake 115 [E]	---	-----	---	-----
J	163058	SL Junior Brake 78 [J]	163058	SL Brake 78 [E],[J]	163058	SL Brake 78 [J]
	162776	SL Junior Brake 90 [J]	162776	SL Brake 90 [E],[J]	162776	SL Brake 90 [J]
	---	---	163067	SL Brake 100 [E],[J]	163067	SL Brake 100 [J]
	---	---	163068	SL Brake 115 [E],[J]	163068	SL Brake 115 [J]

4. W/O BRAKE BINDING MODELS

ELAN is offering some binding models without brakes, (marked "w/o brake") to avoid brake exchanges later on and to provide suitable brakes for different ski widths. For these models you need to order appropriate brakes separately. Please find all available spare brakes in the ELAN brake line overview on page 31.

TECHNICAL INFORMATION

ELAN BRAKE LINE 2018/19



COLOR CODE	ELAN BINDING MODELS	ART. NO.	SALES CODE	BRAKE MODEL / WIDTH
A	ATTACK2 18 X AT (ATTACK 18 X*) ATTACK2 13 AT (ATTACK 13*)	163032	DF163032000	Power Brake² Race PRO 16-85 [A]
		163033	DF163033000	Power Brake² Race PRO 17-85 [A]
		163034	DF163034000	Power Brake² Race PRO 18-85 [A]
		163035	DF163035000	Power Brake² Race PRO 95 [A]
		163036	DF163036000	Power Brake² Race PRO 110 [A]
		163037	DF163037000	Power Brake² Race PRO 130 [A]
		163038	DF163038000	Power Brake² Race PRO 150 [A]
C	AMBITION 12 AT	163003	DF163003000	BRAKE AMBITION 85 (C)
		163016	DF163016000	BRAKE AMBITION 95 (C)
		163004	DF163004000	BRAKE AMBITION 105 (C)
		163005	DF163005000	BRAKE AMBITION 125 (C)
D	ESP 10.0 GW ESP 7.5 AC ESR 10.0	163044	DF163044000	Power Brake² LD 85 [D]
		163045	DF163045000	Power Brake² LD 95 [D]
		163046	DF163046000	Power Brake² LD 110 [D]
		163047	DF163047000	Power Brake² LD 130 [D]
		163048	DF163048000	Power Brake² LD 150 [D]
E	EL 10.0 EL 7.5 AC	163058	DF163058000	SL Brake 78 (E)
		162776	DF162776000	SL Brake 90 (E)
		163067	DF163067000	SL Brake 100 (E)
		163068	DF163068000	SL Brake 115 (E)
F	ADRENALIN 13 ATTACK² 13.0 AT DEMO	163050	DF163050000	Powerrail Brake² LD 85 [F]
		163051	DF163051000	Powerrail Brake² LD 95 [F]
		163052	DF163052000	Powerrail Brake² LD 110 [F]
		163053	DF163053000	Powerrail Brake² LD 130 [F]
G	ATTACK² 11.0 AT DEMO	162943	DF162943000	POWERRAIL BRAKE SL 78 (G)
		163084	DF163084000	POWERRAIL BRAKE SL 85 (G)
		162944	DF162944000	POWERRAIL BRAKE SL 90 (G)
		163078	DF163078000	POWERRAIL BRAKE SL 100 (G)
		162985	DF162985000	POWERRAIL BRAKE SL 115 (G)
J	EL 7.5 AC	163058	DF163058000	SL Brake 78 (E), (J)
		162776	DF162776000	SL Brake 90 (E), (J)
K	EL 4.5 AC ESP 4.5 AC	162965	SP162965000	SX KID BRAKE 74 (K)
		162964	SP162964000	SX KID BRAKE 84 (K)
L	ATTACK² 11 GW	163027	DF163027000	SL Brake FS 78 [L]
		163028	DF163028000	SL Brake FS 90 [L]
		163029	DF163029000	SL Brake FS 100 [L]
		163030	DF163030000	SL Brake FS 115 [L]
	ION 12 BINDING	/	DTG32869085	85
		/	DTG32869100	100
		/	DTG32869115	115
		/	DTG32869130	130
	ION 12 DEMO	/	DTG32871085	85
		/	DTG32871100	100
		/	DTG32871115	115
		/	DTG32871130	130

PRODUCT PREPARATION

Product preparation is of a high importance for every user. All ELAN Skis are engineered and produced according to the actual ISO standards for alpine skis, but even the best manufactured product with the best materials used will not perform well if minimal preparation and maintenance rules are not followed.

1. TUNING

Each and every ski needs to be tuned properly and regularly to maintain its performance and safety. Factory tuning is done on industrial machinery and cannot be copied manually. Only authorized people with knowledge about the handling of service machines should service the skis.

Sintered bases require more frequent waxing but are harder and more resistant to impact damage; extruded bases are less demanding as far as waxing is concerned, but due to their softness may require more frequent repairs of impact damage.

Steel edges are to be sharpened once the edge grip gets less strong or the edges are damaged. Even after only a few days of skiing on ice, the skis can significantly lose their edge grip.

For the tuning of ELAN skis we recommend the following edge geometry:
Angle from base: 1° ± 0,5°
Angle from side: 1,5° ± 0,5°

2. DRILL BITS

Proper binding installation is essential for the optimal performance of the product and proper binding function. Follow the chart of catalogue ski models below regarding the diameter of the drill-bit and depth of drilling. Holes must be sealed with glue. Please, contact the local distributor for non-catalogue models.

DRILL BIT	SKI
Ø4.1 x,9.0 mm	SLX WC, GSX WC, FX SGX, FX DHX, FX SGJ, Airline, Bloodline, GSX Team, SLX Team (>140cm), GSX Master, GSX Fusion, SLX Fusion, SLX Sport Fusion, SL Fusion, Ripstick, SLX/GSX/SLR Waveflex Amphibio 88 XTi, 16 Ti2, 14 Ti, Ripstick 116, 106, 96, 102 W, 94 W Sling Shot Speed Magic, Insomnia, Delight Prime, Delight Supreme
Ø3.6 x 9.0 mm	Amphibio 84 XTi, 84 Ti, 80 XTi, 80 Ti, 12 Ti, Interra, Delight Style All Explore and eRise series, Amphibio 84xti/84ti/76/9/10/11ti Ibex 94 Carbon XLT, Carbon, Ibex 84, Carbon XLT, Carbon Ripstick 86, 86 W, 86 T, Zest, Snow Freeline, Vario Exar Pro (≥140cm), Explore Pro (≥140cm) Jett (≥140cm), Starr (≥140cm), Maxx (≥140cm), RC Race (≥140cm), RC Blue (≥140cm), Sky (≥140cm) Pinball Pro (≥140cm), Twist Pro (≥140cm)
Ø4.1 x 7.0 mm	SLX Team (≤140cm), GSX Team (≤140cm), RCX
Ø3.6 x 7.0 mm	Exar Pro (<140cm), Explore Pro (<140cm)), Jett (<140cm), Starr (<140cm), Maxx (<140cm), RC Race (<140cm), RC Blue (<140cm), Sky (<140cm) Pinball Pro (<140cm), Twist Pro (<140cm)

3. MOUNTING POSITIONS

The mounting position is usually close to the gravity point of the ski. Any variation towards the tip will make the ski more aggressive and quicker to turn any variation towards the tail will make it accelerate better out of turn.

4. MOUNTING POSITIONS FOR SKIS

This measurements shouwld be taken from the tail of the ski and indicate the boot center. All measurements are in millimeters. Acceptable tolerance +/- 1.5mm

MOUNTING POSITIONS FOR MODELS 2018/19

RACE COMPETITION	Length	185	188	191	193
GSX WC	Mounting pos.	805	800	830	825

	Length	157	165
SLX WC	Mounting pos.	670	715

	Length	174	181	191
FX SGJ	Mounting pos.	745	775	820

	Length	201	205	210	211	218
FX SGX	Mounting pos.	870	890	/	920	/
FX DHX	Mounting pos.	/	/	915	/	960

	Length	150	160
Airline	Mounting pos.	640	680

	Length	125	141	158	170	175	181	191
Bloodline	Mounting pos.	515	595	670	740	770	800	850

	Length	145	151	166	175	182
GSX Team	Mounting pos.	/	/	740	745	790
SLX Team	Mounting pos.	620	655	/	/	/

	Length	134	142	150	158
GSX Team	Mounting pos.	580	615	655	692

	Length	122	128	133	139
SLX Team	Mounting pos.	/	/	558	590
RCX	Mounting pos.	514	540	/	/

RACE SERIES	Length	0	0	165	170	175	180	185
GSX Fusion	Mounting pos.	/	/	725	750	775	800	
GSX Master Plate	Mounting pos.	/	/	/	/	775	800	810

	Length	155	160	165	170
SLX Fusion	Mounting pos.	690	715	740	765
SLX Sport Fusion	Mounting pos.	680	705	730	755
SL Fusion	Mounting pos.	680	705	730	755

RACE JR. SERIES	Length	110	120	130	140	150
RC Race Shift	Mounting pos.	500	545	590	635	680

ALL MOUMTAIN AMPHIBIO	Length	152	160	164	166	168	170	172	176	178	182	184
Amphibio 88xti	M. pos.	/	/	/	/	/	765	/	800	/	/	830
Amphibio 16, 14, Black Ed.	M. pos.	/	710	/	740	/	/	770	/	800	/	/
Amphibio 84xti, 84ti	M. pos.	/	/	735	/	/	760	/	785	/	810	/
Amphibio 80ti, 13, 12	M. pos.	670	705	/	/	740	/	/	775	/	/	/
Amphibio 76, 78, 11, 10, 9, 8	M. pos.	655	692	/	/	727	/	/	765	/	/	/

ALL MOUNTAIN	Length	124	138	144	152	160	168	176
Element Green/Blue Orange	Mounting pos.	540	585	630	665	700	735	770
Element White Blue/Black	Mounting pos.	540	585	630	665	700	735	770
Element 76	Mounting pos.	540	585	630	665	700	735	770

	Length	149	156	161	166	171	176
Sling Shot	Mounting pos.	733	755	780	805	830	855

	Length	145	155	165	175
Pinball / Twist	Mounting pos.	715	750	800	850

TOURING Series	Length	149	156	163	170	177	184
Ibex 94 Carbon, XLT	Mounting pos.	/	/	707	740	775	815
Ibex 84, Carbon, XLT	Mounting pos.	/	650	685	720	755	/
Ibex 78	Mounting pos.	649	682	716	750	783	/

BIG MOUNTAIN Series	Length	138	148	150	156	158	160	163	166	167	168	170	174	176	177	181	184	185	188	193
RipStick 116	Mounting pos.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	860	/	900
RipStick 106	Mounting pos.	/	/	/	/	/	/	/	/	/	/	/	755	/	/	790	/	/	825	/
RipStick 96	Mounting pos.	/	/	/	/	/	/	/	/	730	/	/	755	/	/	810	/	/	845	/
RipStick 94 W	Mounting pos.	/	/	/	705	/	/	740	/	/	/	785	/	/	820	/	/	/	/	/
RipStick 86	Mounting pos.	/	/	/	/	/	710	/	/	/	750	/	/	790	/	/	830	/	/	/
RipStick 102 W	Mounting pos.	/	/	/	690	/	/	750	/	/	/	765	/	/	800	/	/	/	/	/
RipStick 86 W	Mounting pos.	600	/	680	/	720	/	/	760	/	/	/	800	/	/	/	/	/	/	/
RipStick 86 T	Mounting pos.	600	650	/	/	710	/	/	/	/	750	/	/	/	/	/	/	/	/	/

FREESTYLE JR. Series	Length	105	115	125	135	145
Pinball PRO / Twist PRO	Mounting pos.	515	560	606	655	705

W Studio – Performance	Length	145	150	155	160	165
Speed Magic	Mounting pos.	640	665	690	715	740

	Length	138	140	146	152	158	160	164	166	170
Insomnia	Mounting pos.	/	/	/650	680	710	/	740	/	770
Interra	Mounting pos.	/	/	/	680	705	/	735	/	/
Delight Supreme	Mounting pos.	/	/	/	685	710	/	745	/	/
Delight Prime	Mounting pos.	/	630	655	580	705	/	740	/	/
Delight Style, Magic	Mounting pos.	/	630	655	680	705	/	/	/	/
Delight Black Edition	Mounting pos.	/	/	/	685	710	/	745	/	/
Zest	Mounting pos.	/	615	640	665	700	/	/	/	/
Snow	Mounting pos.	/	640	665	700	735	/	/	/	/

JUNIOR Series	Length	70	80	90	100	110	120	130	140	150
RC Race, RC Blue	Mounting pos.	/	/	/	/	500	545	590	635	680
Jett , Starr, Sky, Maxx	Mounting pos.	328	361	408	455	493	538	582	628	675
Formula, Pinball Team, Lil'	Mounting pos.	328	361	408	455	493	538	582	628	675

RENTAL	Length	120	130	140	150	160	170	175
Explore 76 RS, eRise 76	Mounting pos.	/	590	645	680	715	750	785
Explore eRise 72	Mounting pos.	560	590	660	695	730	765	/

	Length	138	144	152	160	168
Explore X	Mounting pos.	640	665	700	735	770

	Length	149	156	161	166	171	176
Sling Shot Demo	Mounting pos.	733	755	780	805	830	855

RENTAL RACE	Length	145	150	152	155	158	160	164	165	170
SLX Waveflex	Mounting pos.	/	655	/	680	/	705	/	730	755
Explore eRise 72	Mounting pos.	/	659	/	/	/	730	/	/	765

RENTAL Junior	Length	70	80	90	100	110	120	130	140	150
Exar Pro	Mounting pos.	328	361	408	455	493	538	582	628	675
Explore Pro	Mounting pos.	328	361	408	455	493	538	582	628	675

SHORT SKIS	Length	99	125	135
Freeline	Mounting pos.	450	605	650
Vario	Mounting pos.	450	/	/

NOTES:

ADJUSTMENT

ADJUSTMENT

CLASSIFY YOURSELF

DETERMINING YOUR SKIER TYPE IS YOUR RESPONSIBILITY!

Your Skier Type, height, weight, age and boot sole length are used by the shop technician to determine the release/ retention settings for your bindings. Consult these descriptions to select your classification. Be sure to provide accurate information. Errors increase your risk of injury.

TYPE I

Cautious skiing on smooth slopes of gentle to moderate pitch.

Entry-level skiers and skiers who designate themselves as Type I receive lower than average release settings. This corresponds to easier binding release in a fall.
Entry-level skiers or skiers who are uncertain of their preference.

Skiers not classified as Types I or III

TYPE II

Skiers who designate themselves as Type II receive average release settings appropriate for most recreational skiing.
Most skiers are satisfied with a Type II setting.

TYPE III

Fast skiing on slopes of moderate to steep pitch.

Skiers who designate themselves as Type III receive higher than average release settings. This corresponds to decreased risk of inadvertent binding release.
Type III settings should not be used by skiers of less than 21 kg/47 lbs.

If you are unsatisfied with the release/retention settings that result from your classification please mention this to your binding technician.

NOTE:
If the skier reports release/retention problems see the chapter “trouble shooting release/retention problems”, page 80 in the manual. Skiers who desire release/retention settings lower than Type I may designate themselves **(I-)**. **Type I-** is inappropriate for skiers 17 kg/38 lbs or less. **Type I-:** Move up the table one skier code.

Skiers who desire release/retention settings higher than Type III may designate themselves **(III+)**. **Type III+**: Move down the table three skier codes.

Skiers may select skier type designations that are different for twist and forward lean. In such a case, the selection shall be indicated by a slash separating twist and forward lean selections, in that order (for example, K/L, K for the toe and L for the heel.

ADJUSTMENT
RELEASE/RETENTION ADJUSTMENT TABLE

NOTE: The initial indicator values found in this table are only the starting point in the binding setting process. The initial values may need to be modified in order to achieve the correct measured release values.

					1	2	3	4	5	6	7	8
					Single Code							
kg (lbs)	cm (ft 'in")	Skier Code	Mz (Nm)	My (Nm)	a - i	j - n	o - s/B	t/C -G	H - L	M - Q	R - V	V - 6
			5[a]	18[a]	≤ 230	231-250	251-270	271-290	291-310	311-330	331-350	≥ 350
10-13 kg (22-29 lbs)		A	8	29	0,75	0,75	0,75					
14-17 kg (30-38 lbs)		B	11	40	1,00	0,75	0,75	0,75				
18-21 kg (39-47 lbs)		C	14	52	1,50	1,25	1,25	1,00				
22-25 kg (48-56 lbs)		D	17	64	2,00	1,75	1,50	1,50	1,25			
26-30 kg (57-66 lbs)		E	20	75	2,50	2,25	2,0	1,75	1,50	1,50		
31-35 kg (67-78 lbs)		F	23	87	3,00	2,75	2,50	2,25	2,00	1,75	1,75	
36-41 kg (79-91 lbs)		G	27	102		3,50	3,00	2,75	2,50	2,25	2,00	
42-48 kg (92-107 lbs)	≤ 148 cm (≤ 4'10")	H	31	120			3,50	3,00	3,00	2,75	2,50	
49-57 kg (108-125 lbs)	149-157 cm (4'11"-5'1")	I	37	141			4,50	4,00	3,50	3,50	3,00	
58-66 kg (126-147 lbs)	158-166 cm (5'2"-5'5")	J	43	165			5,50	5,00	4,50	4,00	3,50	3,00
67-78 kg (148-174 lbs)	167-178 cm (5'6"-5'10")	K	50	194			6,50	6,00	5,50	5,00	4,50	4,00
79-94 kg (175-209 lbs)	179-194 cm (5'11"-6'4")	L	58	229			7,50	7,00	6,50	6,00	5,50	5,00
≥ 95 kg (≥ 210 lbs)	≥ 195 cm (≥ 6'5")	M	67	271				8,50	8,00	7,00	6,50	6,00
		N	78	320				10,00	9,50	8,50	8,00	7,50
		O	91	380				11,50	11,00	10,00	9,50	9,00
		P	105	452						12,00	11,00	10,50
			121	520								
			137[b]	588[b]								

a...Lowermost tollerance limit
b...Uppermost tollerance limit

HOW TO USE THE RELEASE/ RETENTION ADJUSTMENT TABLE:

1. Determine the Skier Code by locating the skier's weight in the first column and the skier's height in the second column. If the height and weight are not on the same line select the Skier Code closer to the top of the chart.

2a. The Skier Code found in step 1 is for Type I skiers. For Type II skiers move down the chart toward the bottom one Skier Code. For Type III skiers move down two Skier Codes.

2b. If the skier is age 50 or older or under 10 move up the chart one Skier Code toward the top. For skiers 13 kg/ 29 lbs and under, no further correction is required.

3. Find the column that corresponds to the skier's boot sole measurement in millimeters.

4. The value where the Skier Code and the boot sole measurement intersect is the initial indicator setting for the skier.

   If the intersection of the row and column falls in a blank box, do not move up or down the chart. Move sideways on the same row to the nearest box showing a visual indicator setting.

5. This value should be recorded on the workshop form under Initial Indicator Settings

MECHANICAL SYSTEM TESTING

1. Adjust the bindings toe and heel indicators to the Initial Indicator Setting.

2. Use a calibrated torque measuring device according to the instructions provided by the supplier.

3. Test that binding by releasing it at least once in all directions.

4. Three tests are required in each direction. The middle quantitative value of the three releases should be used as the test result.

5. Using the previously determined Skier Code slide across the chart to the column representing twist torque reference values.

6. If the test result is within one torque value above to one torque value below the reference value, it is in the Inspection Range. These results are acceptable and no further adjustment is necessary.

7. If the test result is within two torque values above to two torque values below the reference value, it is in the In-Use Range. The indicator value should be readjusted and the system retested so that it falls in the Inspection Range. Record the corrected indicator value in the box for final release/retention settings.

8. If the test result value falls out of the In-Use Range the system should be thoroughly inspected for the following:

   1. Correct forward pressure
   2. Correct Sole-hold down adjustment
   3. Worn or contaminated AFD's
   4. Out of standard boot soles

   No work can be performed on the system until these problems are corrected.

9. Check the heel for forward lean the same way, determining the middle quantitative value of three vertical releases. Adjust if necessary.

10. Record final indicator settings on the workshop form in the area for final release/retention settings

TROUBLESHOOTING RELEASE/RETENTION PROBLEMS

IF THE SKIER REPORTS A RELEASE/RETENTION PROBLEM:

- Re-inspect the equipment to make sure that all components are in good condition and function properly.
- Test the system to make sure that it is calibrated properly.
- Have the skier use the "Classify Yourself" materials to make certain that the correct Skier Type has been selected
-

If component inspections and a calibration check do not reveal a problem the skier may be requesting discretionary settings.

INFORMATION FOR SKIERS REQUESTING DISCRETIONARY SETTINGS.

1. Your normal release/retention settings comply with ISO/ASTM standards. Although these guidelines may be inappropriate for some types of competitive skiing or competition training, they are believed to provide an effective compromise between the release and retention needs of most recreational skiers.

2. Adhering to these guidelines may help to reduce the risk of injuries resulting from improper release/retention setting selection. However, skiing involves inherent risks. Injury can result from simply falling down, impact with an object, or from many other actions. Many injuries are unrelated to the function of the release system. Furthermore, even a properly adjusted binding cannot protect the skier in all situations.

3. Difficulties with release or retention may be unrelated to release/retention settings and can result from your skiing style, the incompatibility of your boots and bindings, or wear, damage, or contamination of a component of the release system. Be sure to describe your circumstances to the shop technician and to authorize recommended inspections and repairs before proceeding.

4. If you have been dissatisfied with the release/retention settings that result from your normal skier classification, you may wish to consider changing your skier classification, or designating skier type classifications that are different for twist and forward lean. You may even request discretionary release/retention settings that are outside of your setting range.

   If you believe that you require higher release/retention settings but are unsure if the increase should be applied to twist or forward lean settings, request that the increase be applied to forward lean settings before experimenting with higher twist settings. Similarly if you believe that you require lower release/retention settings but are unsure if the decrease should be applied to twist or forward lean settings, request that the decrease be applied to twist settings before experimenting with lower forward lean settings.

   Lower settings correspond to an increase in the risk of inadvertent binding release in order to gain increased releasability in a fall.

   Higher settings correspond to a decrease in releasability in a fall in order to gain a decreased risk of inadvertent binding release.

5. Although the shop technician may help you to record your choice on the appropriate form, the final decision on your release/retention settings is yours.

RENTAL-TEST AND INSPECTION PROCEDURES

PREPARING AND CHECKING RENTAL SYSTEMS

Customers usually don't treat rental equipment as gently and carefully as they would handle their private property.

In order to keep your rental fleet as functional and appealing as possible, a systematic maintenance program is a must. The best results are obtained with an ongoing program that constantly checks boots, bindings and skis. To keep the equipment in good condition while minimizing liability we recommend the following program (this is a requirement in the U.S.). In order to produce a truly efficient rental inventory some pre-season setup is required.

SINGLE CODING

This enables a quick binding to boot adjustment even during the rush hours of rental business. ELAN offers self-adhesive color stickers (Art. No. 162561) with the SINGLE CODE to be applied before season.
You simply check the boot's SINGLE CODE and adjust the binding accordingly. In order to gain the efficiencies of SINGLE CODE, all you need to do is follow our simple procedure.

1. Mount all bindings according to the ELAN manual. Pick a mounted sample binding of each model.
2. Place a boot of each size in the binding and adjust forward pressure until correct.
3. Open the heel and remove boot.
4. Record the SINGLE CODE from the track on the side of the heel housing. (The boot must not be in the binding when you read the code).
5. Check each code again before marking all boots of this size with their SINGLE CODE (Pict. 1)!

You can get SINGLE CODE stickers as a spare part. "SINGLE CODE" sticker set Art. No. 162561.

For this procedure the Rental Boot Indicator (Art. No. 162617) can be used.

Pict. 1

RENTAL INSPECTION SUMMARY

Since it is impractical to perform a full inspection each time a system is rented, a routine of pre-season and in-season inspections has been developed to verify release indicator accuracy, confirm correct equipment function, and assure proper assembly and adjustment procedures by the rental shop staff.The complete rental procedure only has to be performend on alpine products and rental products under 15 days of use. The procedure does not apply to touring products. For touring products and rental products over 15 days of use the ISO standard 11088 has to be applied. Fully implemented, the procedures that follow provide rental shop customers a standard of care equivalent to that provided retail shop customers under current ISO and ASTM standards.The program is based on standards: ISO 13993 and ASTM F1064.
The rental procedure is not applicable for complete and incomplete alpine ski-binding-boot systems which are rented 15 days or more and for alpine touring ski-binding-boot systems.

PRE-SEASON INSPECTION

Prior to the beginning of each season and whenever new inventory is added, an inspection should be made of the components of the rele se/retention system (binding-boot) in accordance with the procedure described in this manual (Page 41-44).
Bindings that fail go through a troubleshooting procedure (see page 85/86) to identify and correct the deviation or malfunction. If this procedure does not correct the problem, the binding is removed from inventory (Page 41-44). All rental boots, new and used, are visually inspected for damage, wear, contamination, broken or missing parts, or inferior materials at contact points with the binding. If a boot fails, a 16 system (or less if 16 systems are no available) random sample is also tested. If any boot in this sample creates a deviation greater than the inspection tolerance all boots from that cell are then tested. Boots that fail and cannot be repaired are removed from inventory.

IN-SEASON INSPECTION

At regular intervals during the season, samples are taken from the rental inventory and evaluated in accordance with the procedures described in this manual (Page 85-86). In-season inspections are performed on complete rental systems to ensure that the equipment is adjusted appropiately and continues to function correctly.

IMPORTANT TERMS

CORRECTION FACTOR

The value that must be added or subtracted from the initial visual indicator setting to bring the result within the Inspection Tolerance (or Inspection Range).

DIRECTIONS OF RELEASE

Unless otherwise specified (see In season Inspection), the directions of release to be tested are forward lean and clockwise and counter clockwise in twist.

TEST DEVICE

A device which meets ISO standard 11110 or ASTM standard F1061 and has been checked and maintained in the manner specified by the device manufacturer.

TEST RESULT OR RELEASE TORQUE

The middle quantitative value of three tests made in the same direction.

SYSTEM BINDING

A binding that is slid onto a pre-mounted or integrated track without drilling.

PRE-MOUNTED BINDING

A binding that is already mounted on the ski before being delivered to the shop.

REFERENCE BOOT SELECTION

The Reference Boot is a boot of a designated sole length which is otherwise typical of the boot inventory. Use the procedure below if the boot inventory includes several models and a representative boot cannot easily be identified.

1.Select five single boots with sole lengths as specified in Table [A] for the binding type to be tested: adult, junior, child, BYS or HRS.

2. Clean all five boots with a mild detergent and water.

3. Adjust a rental binding to the release indicator setting specified in Table [A] for the binding type.

4. Fit the binding to the boot and determine the Release Torque in all three directions of release (forward lean and both directions in twisthree releases in each direction).

5. Average the Release Torque for CW (clockwise) and CCW (counter clockwise) twist release.

6. Reject and replace any boot with a CW to CCW difference of more than 6 Nm for adult boots or 4 Nm when testing child boot types.

7. Rank the five twist results and select, as the Reference Boot for twist, the middle boot.

8. Rank the five forward lean results and select, as the Reference Boot for forward lean, the middle boot.

PRE-SEASON BINDING INSPECTION

The procedure that follows is an integral part of pre-season maintenance. It is also a good way to determine if maintenance and which units have outlived their usefulness and must be removed from inventory.

1. Clean areas of the bindings that contact the boot and perform all preseason binding maintenance.
2. Visually or manually check:
   a.) AFD condition.
   b.) Brakes function.
   c.) Release indicator readability and travel
   d.) Screw tightness.
3. Adjust each binding with the reference boot, then adjust the release value indicators to the specified value found in table [A].
4. Check that the heel track and toe track Single Code agree with the sole length Single Code of the reference boot.
5. With the Reference Boot in the binding, verify elastic travel of the toe piece by striking the boot toe with a mallet or dead hammer and checking that the toe piece returns the boot quickly and completely to center.
6. Verify elastic travel of the heel piece by lifting the boot while depressing the heel piece cocking lever and checking that the heel piece returns the boot quickly and completely to the latched position.
7. Manually release the binding 3 times in each direction.
8. Lubricate all boot/binding interfaces with a mild liquid detergent and water solution.
9. With the Ski Binding Test Device determine the Release Torque for each direction of release (forward lean and both directions in twist).
10. Record “PASS” in the bindings maintenance record if Test Results are within the Inspection Tolerance provided in Table [A].

11.a If the test results of any binding from the before taken sample for factory pre-mounted or sealed system bindings is outside the Inspection Tolerance in Table [A], every binding of the same cell is tested.

11.b Set the ski aside if the Test result in any directions of release is outside the Inspection Tolerance in Table [A].

12. Follow Troubleshooting Procedure on page 85/86 for units which have been set aside and retest if changes in the unit’s condition or adjustment are made.
13. Record “FAIL” in the binding’s maintenance record if, after troubleshooting, test results in any direction of release are outside the In-Use Range. Replace the “failed” unit and retest before returning the ski to service.
14. If after troubleshooting, Test Results are outside the Inspection Tolerance but within the In-Use Range, apply a Correction Factor to the unit and note the Correction Factor for that unit in the binding’s maintenance record.
15. If many bindings fail, check the test device and reinspect the Reference Boot. If necessary, select another boot and retest the bindings.

PRE-SEASON BOOT PREPARATION

The procedure that follows is an integral part of pre-season maintenance.

1. Clean all boots with a mild detergent and water, and repair or replace damaged or missing parts.
2. Visually check:
   a.) Compliance with ISO and other applicable standards ISO 5355. If the boot contacts the binding, brake, or AFD in areas other than the designated contact points, it may be incompatible with the binding.
   b.) Boot material. If the sole at the contact points with the binding or AFD can be scratched with a finger nail, the boot may be of inferior quality and incompatible with the binding.
   c.) Boot sole condition. If the boot sole is damaged, worn or contaminated at contact points with the binding or AFD in a manner which cannot be corrected, the boot may be incompatible with the binding, “Verify boot sole dimensions” on page 80.
   d.) Brake compatibility with sole.

Skier Code	Binding Type	Boot sole length [mm]	Release Indicator Setting	Reference Torque Twist [Nm]	Reference Torque Forward [Nm]	Twist Inspecton Tolerance [Nm]	Forward Inspection Tolerance [Nm]	Twist In-Use Range [Nm]	Forward In-Use Range [Nm]
F	Children	260	2.5	23	87	20-27	75-102	17-31	64-120
J	Junior	300	4.5	43	165	37-50	141-194	31-58	120-229
L	Adult	320	6.0	58	229	50-67	194-271	43-78	165-320

Table [A] Pre-season binding inspection

e.) Rubber and/or metal sole protectors. If such materials contact the binding or AFD the boot may be incompatible with the binding.
f.) Mold flashings. Flashing which can be seen or felt at contact points with the binding, brake, or AFD must be carefully removed.

3. Remove from inventory all boots that have failed the visual check.

PRE-SEASON BOOT SAMPLING

Although sampling eliminates the need to test every boot before the season starts, the sample chosen must be representative of the inventory.

1. For boots that are new to inventory or have never been inspected, take a single boot from each cell (a cell is all boots of the same make, model, year, and shell size).

2. For used boots, take a 5% (but not less than 16 or more than 80) random sample of the entire inventory, see Table [D]. Make sure that there is at least one boot from each cell in the sample.

PRE-SEASON BOOT INSPECTION

The procedure that follows helps to assure boot/binding compatibility and boot interchange ability.

NOTE: when using Table [A], [B], [C] in the Boot Inspection procedures that follow, the Sole Length and release Indicator Setting columns should be ignored.

1. Randomly select a pair of bindings that have passed the preseason inspection from each binding type: adult, junior, child.
2. Lubricate all boot/binding contact points with a mild liquid detergent.
3. Without regard to whether the boot is new or used, sort the sample by sole type and length according to the 20 mm Sole Length Categories defined by the Release/Retention Adjustment Chart.
4. In each Sole Length Category rank the boots by sole length and select the middle boot.
5. In each Sole Length Category fit the appropriate reference bindings to this “typical” boot and adjust the two bindings to release as close as practical to the Reference Torque in Table [A], [B], [C]. Use the Reference Torque corresponding to Skier Code [L] for the Adult binding, [J] for Junior binding, and [F] for the Child binding. (Reference [B]- black, yellow, silver; [C] - red triangle, blue square, black diamond, white circle)
6. Rinse the lubricant from one binding and mark it “clean”. Mark the other “lubricated”.
7. Test each boot in the Sole Length Category with the clean Reference Binding and then the lubricated Reference Binding in both twist and forward lean (only one direction in twist is required for the clean binding).
8. Set aside any boots for which the lubricated Test Result is more than 20% less than the clean Test Result in the same direction of release or the lubricated Test Result in any direction of release is outside of the Inspection Tolerance provided in Table [A], for Skier Code used to set up the Reference Binding (Reference [A] - F, J.

9.a For a new boot that fails, check a 16 system (or less if 16 are not available) random sample of the boots of the same cell (make, model, year, and shell size) as those that failed. If any boot of these samples creates a deviation greater than the Inspection Tolerance, check all other boots from the same cell.

9.b For used boots, if any boot of the sample creates a deviation greater than the Inspection Tolerance, check all other boots from the same cell.

10. Check all other boots from the same cell (make, model, year, and shell size) as those that failed.

NOTE: On completion of the preseason inspection, clean the liquid detergent from equipment and lubricate the binding before returning it to service.

IN-SEASON SAMPLING AND INSPECTION

The in-season Inspection is a test of complete systems and all the procedures used by the rental staff to assemble and adjust the system. The program uses random samples of rental inventory taken at routine intervals. Any sampling program that gives every unit of inventory the same chance as every other of being picked is valid.

SAMPLE FREQUENCY

Random sampling is conducted throughout the entire season. Frequency is as follows:

1. After 7 days of operation.

2. If the sample passes the next sampling is taken after another 7 days operation.
3. If two consecutive samples pass, sampling frequency is increased to 14 days (reduced sampling schedule).
4. If a sample fails at any time, daily sampling is instituted until two consecutive samples pass, at which point weekly sampling resumes.

Facilities that have an average daily output of fewer than 160 rental skier days/day (averaged on a weekly basis) may adopt an alternate procedure and sample, over the sampling interval, 5% of average daily output, and delay evaluation of the inspection results until a total of 16 sampled units is detected at any time, corrective action should be taken. This alternative method is used with a normal (weekly) or daily sampling schedule but is inappropriate for a reduced schedule.

SAMPLE SIZE

Sample size is 5% of inventory but not less than 16 nor more than 80 units as noted in Table [D]. Sample size may be based on average daily output if rental output drops below 50% of capacity over the sampling period. The sample is taken at any time during the sampling interval or may be spread over the period. The sample represents both inventory available for rental and equipment in the condition in which it is returned, with an equal number of units drawn of each group. All units within such sample should be selected randomly.

IN-SEASON INSPECTION

1. Take a random sample of the rental inventory as determined by Table [D]. Take half the sample from inventory as it is either rented or returned and the remainder from inventory available for rental.
2. The returned samples are tested with the last customer's data, the other samples adjust to randomly selected skier data. Consider already applied Correction Factors.
3. Wipe the boot clean and cycle the boot/binding systems at least once in each direction.
4. Test sample units in Twist (one direction only) and Forward Lean.
5. Compare the Test Results with the Inspection Tolerance for the appropriate Skier Code, see ISO 11088 Release/ Retention Adjustment Chart (page 39).
6. If the results are within the Inspection Tolerance, one value above to one value below the reference value, the unit passes.
7. If the results are outside Inspection Tolerance but within the In-Use Range, two values above to two values below the reference value, count the unit as a range class I deviation.
8. If the results are outside the In-Use Range, count the unit as a range class II deviation.
9. Check elastic travel and visually inspect the ski brake function, interface areas between boot and binding, including AFD, lug height adjustment (if appropriate), and forward pressure. Count any deficiencies as range class I deviation.
10. If more than the maximum number of range class I deviations given in Table [D] are found in the sample, or a single range class II deviation is detected the sample fails and daily sampling must be conducted until the problem which led to the failed sample is found and corrected. See pages 85/86 for Troubleshooting Procedures following a Failed In season Inspection.
11. Record the date the sample was tested, the number of units tested the number of range class I and range class II deviations, whether the sample passed or failed and any actions taken. There is no need to record the identity of units tested or actual Test Results.

RENTAL/DEMO OF PARTIAL SYSTEMS

Many shops rent their customers partial ski equipment systems. Boots only if customers own their own skis with bindings, or skis and bindings if the customers own their own boots.

Additionally some shops utilize on-hill "demo days" as a means by which new products can be tested and evaluated by potential buyers. In order to offer these skiers the same level of care as that afforded under the preceding procedures, the following guidelines should be used:

RENTAL OF SKIS/BINDING ONLY CUSTOMER - OWNED BOOTS

Although the retail test procedure may be applied in this case, it is often impractical to require actual system testing, especially in on-hill situations. In lieu of retail testing, the following procedures may be employed:

1. The ski/binding system to be rented or demoed should be tested "pre-season" using a boot which passes the Boot Visual Inspection.
2. TThe skier's boot should also pass the Visual Inspection. If any questions exist regarding the quality of the boot, or ifonly the boot is rented retail-type testing should be used.
3. The binding should be adjusted and its indicators set per current ELAN recommendation.
4. A full record noting appropriate customer information and binding settings should be kept by the individual or organization responsible for the adjustment.
5. After seven days of use, the ski/binding system should be tested according to the In-Season Inspection Procedures previously described.

NOTE for US and Canada
Signatures of both the customer and ELAN Certified Mechanic are required on all shop forms to qualify for the ELAN Dealer Indemnity Program.

	min.								max.	
Inventory Size - pairs	50	100	200	300	400	500	600	700	800	900
Inventory Size - units (half pairs)	100	200	400	600	800	1000	1200	1400	1600	1800
Sample Size - units (half pairs)	16	16	20	30	40	50	60	70	80	80
Max. Class 1 dev.	3	3	4	6	8	10	12	14	16	16

Table [D]

MOUNTING
BINDINGS & PLATES

MOUNTING

WORKSHOP TOOLS AND AIDS

To make your work easier, ELAN provides a variety of workshop tools and aids. Find the whole product range below. Furthermore ELAN / Tyrolia offers different templates for all available ELAN ski bindings and plates. Find the overview of the drill template selection on next pages. Referring to this overview you are able to determine easily which template should be used with which binding. Also find this information on the removable bench chart which is located inside the back cover of this Technical Manual or at the label on the binding box. For earlier lines, refer to the corresponding Technical Manuals or use the Online Spare Parts OMS to search for specific information.

Picture	Item	packed	Art.No.
	Drill Template Adapter-Set	per piece	162569
	Drill 4.1 Ø x 7.0 mm long Drill 4.1 Ø x 9.0 mm long Drill 3.5 Ø x 7.0 mm long Drill 3.5 Ø x 9.0 mm long Drill-set complete	per piece per piece per piece per piece per set	162772 162773 162770 162771 162774
	Screwdriver flat Screwdriver incl. Pozidrive #3 Bit (160805) Handy Ratchet incl. bits (162575 + 162576) Slotted Screw Bit for Handy Ratchet Pozidrive #3 Bit for Handy Ratchet Pozidrive #3 Bit for Screwdriver 162800 and electric drivers hexagon. 1/4" (6.35 mm) Pozidrive #3 Bit for electric driver (Black & Decker, Skill, Thor, Atlas-Copco, Virax, Consolidated, Bosch, Ingersoll-Rand), hexagon. 1/4" (6.35 mm) Pozidrive #3 Bit for electric driver (Bosch, Metabo, AEG), hexagon. 1/4" (5.5 mm) Torx bit 25/50 - 1/4 inch	per piece per piece per piece per piece per piece per piece per piece per Zpiece 10 pieces	160806 162800 162574 162575 162576 160805 160802 160803 163066
	Special set for repairs (drill bit and plugs) Drill bit for repair set Special plastic plugs for repair set	per set per piece 50 pcs	162127 162128 162129
	Plastic plugs mixed Plastic plugs silver	500 pcs 500 pcs	160857 162856
	Service-Grease-Spray (500 ml) Grease Glue	per piece per piece per piece	162779 160052 160858
	Rubber band for brake	10 pcs	162562
	Rental Boot Indicator (Single Code, mm) Slide (replacement) for Rental Boot Indicator	per piece per piece	162617 162518
	SINGLE CODE Rental Boot Stickers (5 sheets)	per set	162561
	Height Adjustment Tester for AAA-Series and Freeflex EVO	per piece	162983
	Write&wipe rental ski sticker	24 pcs	PSU10017000
	Rental sticker landing pad	20 pcs	PSU11017000
	ELAN screwdriver	2 pcs	PSM00413000
	Apron	2 pcs	PSM10013000

MOUNTING

DRILL TEMPLATE SELECTION

All templates are equipped with extended clamping jaws and an enlarged range of the fixing mechanism. The STANDARD fixing mechanism ranges from 59 to 108 mm, the ADRENALIN, AMBITION and ATTACK DEMO mechanism from 75 to 125 mm and the FAT mechanism from 104 to 154 mm. For more versatility ELAN / Tyrolia offers a template adapter set to adapt the mounting range of your jig (see page 46).

DRILL TEMPLATE 92 W (162760) for ski widths from 59 to 108 mm
DRILL TEMPLATE 92 FAT (162868) for ski widths from 104 to 154 mm

BINDINGS:

ER 20.0 (X) FF EVO, ER (X) 16.0 FF EVO, ER 17.0 FREEFLEX EVO, ER 11.0 FREEFLEX EVO, ER 14.0 FREEFLEX EVO, ER 11.0, ATTACK^2 18 (X) AT, ATTACK^2 13 AT, ATTACK^2 16 AT, ATTACK^2 11 GW, EL 7.5 AC, EL 10.0

DRILL TEMPLATE AMBITION (163000) for ski widths from 75 to 125 mm
PLASTIC FOIL TEMPLATE AMBITION (163011)

BINDINGS:

AMBITION 12 AT

DRILL TEMPLATE ATTACK DEMO (163009) for ski widths from 75 to 125 mm
PLASTIC FOIL TEMPLATE ATTACK DEMO (163015)

BINDINGS:
ATTACK^2 13 AT DEMO

DRILL TEMPLATE BASES & PLATES (162865) for ski widths from 59 to 108 mm

PLATES:
EP 9.0, EP 9.0+, Quick Trick Twin PR

DRILL TEMPLATE RACE PLATE 09 (162902) for ski widths from 59 to 108 mm

PLATES:
Raceplate RDX EP 14 WC, Junior EP 11.5 DUO

DRILL TEMPLATE 94 W (162761) for ski widths from 59 to 108 mm

BINDINGS:
EL 4.5 AC

DRILL TEMPLATE SP 2003 W (162763) for ski widths from 59 to 108 mm
DRILL TEMPLATE SP 2003 FAT (162879) for ski widths from 104 to 154 mm

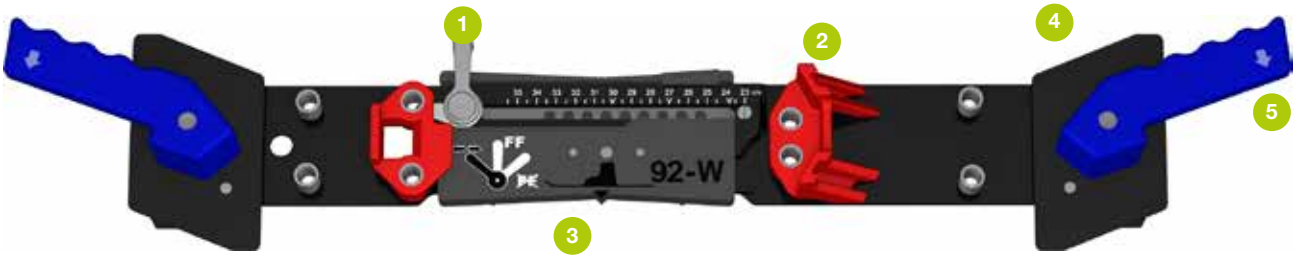
BINDINGS:
ESP 10.0 GW, ESP 7.5 AC, ESP 4.5 AC

DRILL TEMPLATE SR 2003 W (162762) for ski widths from 59 to 108 mm

BINDINGS:
ESR 10.0

MOUNTING

DRILL TEMPLATE 92W & 92FAT



Drill Template 92W Art.No. 162760
for ski widths from 59 to 108mm

Drill Template 92 FAT Art.No. 162868
for ski widths from 104 to 154mm

1. COMPATIBILITY

Presently the drill template 92 W & drill template 92 FAT can be used for:

BINDINGS:

ER 20.0 (X) FF EVO, ER (X) 16.0 FF EVO, ER 17.0 FREEFLEX EVO, ER 11.0 FREEFLEX EVO, ER 14.0 FREEFLEX EVO, ER 11.0, ATTACK² 18 (X) AT, ATTACK² 13 AT, ATTACK² 16 AT, ATTACK² 11 GW, EL 7.5 AC, EL 10.0

All ELAN adult bindings come with screws with a penetration depth of 8 mm for skis, group G1 & G2.

If recommended by the ski manufacturer use shorter screws with a penetration depth of 6 mm. The junior bindings are delivered with screws with a penetration depth of 6 mm. For mounting junior bindings on plates or on skis, group G1 & G2, replace them by longer screws.

Drill template 92 W can be used for ski widths from 59 mm to 108 mm, whereas the Drill template 92 FAT fits ski widths from 104 mm to 154 mm. For other skis use the template adapter set (Art. No. 162569). With this adapter set, you can mount skis from 45 mm to 132 mm with the standard drill template 92 W, as well as skis from 90 mm to 178 mm with Drill Template 92 FAT.

NOTE: ELAN offers different types of brakes. Refer to the brake overview on page 29 for brake and binding compatibility. The description of the brakes always includes a number and a color-letter code. This number stands for the maximum ski width in the brake area and not in the ski center! The color letter code defines the brake segment.

2. ADJUSTING THE DRILL TEMPLATE

To adjust the template unlock the locking lever (1) by rotating it counter-clockwise to the far left position.

FREEFLEX EVO/PRO

NOTE: Due to the center piece these bindings are limited to ski boots with sole lengths from 257 to 372 mm. Place the ski boot in the template and push the template together until the stops (2) come against the ski boot sole. Take the boot out of the template. Position the locking lever (1) in the mid position, then open or close the template to the nearest centimeter mark.

FOR TWO-PIECE AND AATTACK BINDINGS

Place the ski boot in the template and push the template together until the stops (2) come against the ski boot sole. Lock the lever to the far right position to prevent length change, and then take the boot out of the template.

3. POSITIONING OF THE DRILL TEMPLATE

Open the clamping jaws (4) of the template by rotating the clamping handles (5) and then place template correctly on the ski, with the boot midsole indicator (3) aligned with the mounting mark on the ski. Be sure the template is evenly seated against the ski's top surface. Release clamping handles to attach the template to the ski. Check the boot midsole mark with template mark. If they are not the same use the boot midsole mark to align the template with the ski mounting mark.

NOTE: Keep in mind that some ski manufacturers do not use the center of boot sole location method. Always follow their instructions.

4. DRILLING THE HOLES

If not otherwise specified by the ski manufacturer, use a 4.1 Ø x 9.0mm drill bit. Use a 4.1 Ø x 7.0 mm drill bit for skis, group G3 & G4. Drill the holes using the appropriate drill bit.
If required by the ski manufacturer, tap the holes. After drilling place a drop of ELAN glue in each hole.

5. MOUNTING

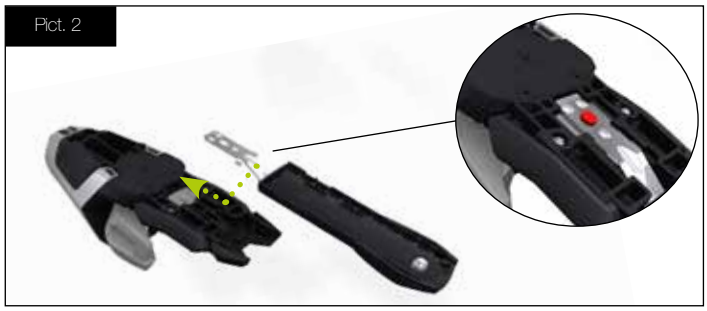
5.1. FOR FREEFLEX EVO/PRO

Place the pre-assembled heel over the prepared holes (Pict. 1) and tighten the screws in a cross pattern.

Pict. 1

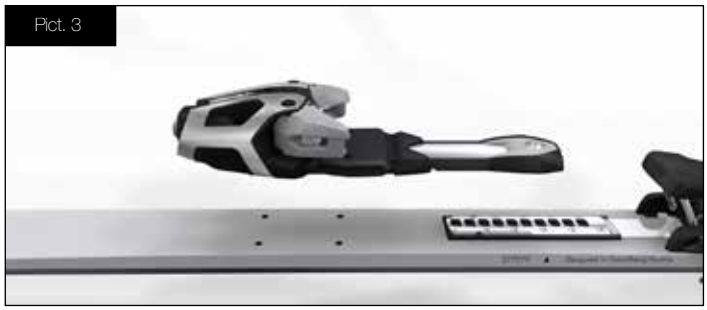
Then attach the AFD to the toe and check if the AFD has snapped in, in its specific position (Pict. 2).

Pict. 2



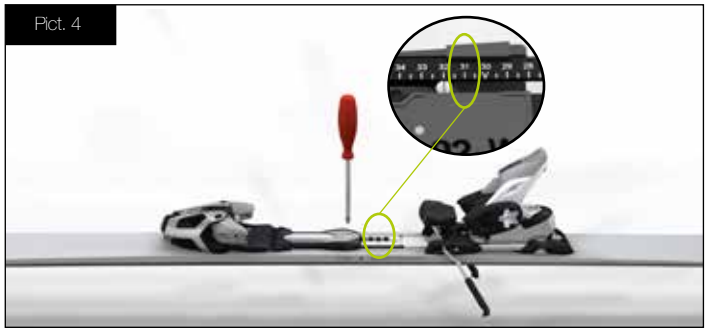
Then you have to place the pre-assembled toe over the holes. (Pict.3)

Pict. 3



ATTENTION: First you have to tighten the screw in the center – the number has to correspond to the centimeter mark from the template (Pict. 4). To fix it you have to hold the bands together and tighten the screw carefully!

Pict. 4



After this align the toe over the holes and fasten the screws in a cross pattern. (Pict 5)

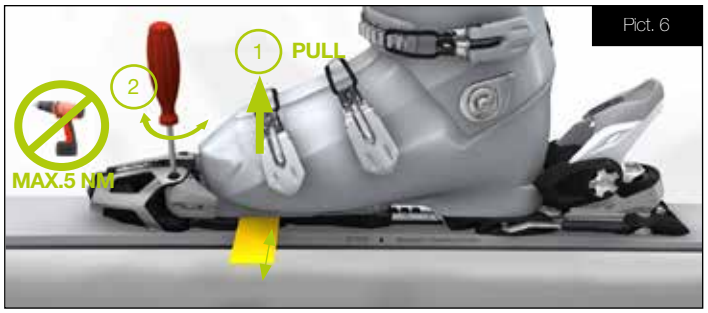
Pict. 5

5.1.1. SOLE HEIGHT ADJUSTMENT - Race AFD

For proper function of the Freeflex EVO binding (only models with the Race AFD) the height of the AFD must be adjusted to the height of the boot sole. ELAN recommends using the "boot height adjustment tester" (Art.No. 162983) to get the ideal distance of 0.5 mm between boot and AFD. Use Freeflex EVO bindings only with Alpine boots.

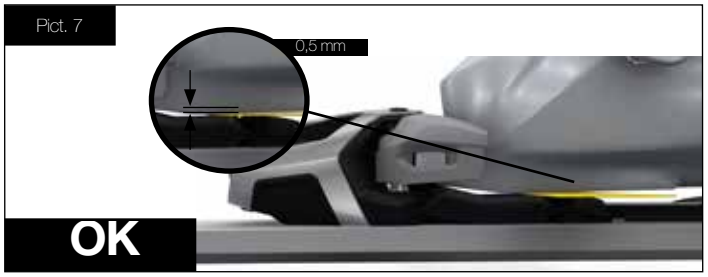
Turning the adjustment screw at the toe moves the Wings up or down. Place the tester on the AFD and enter the boot in the binding. Lift the tip of the boot to take out the play of the toe (Pict. 6).

Pict. 6



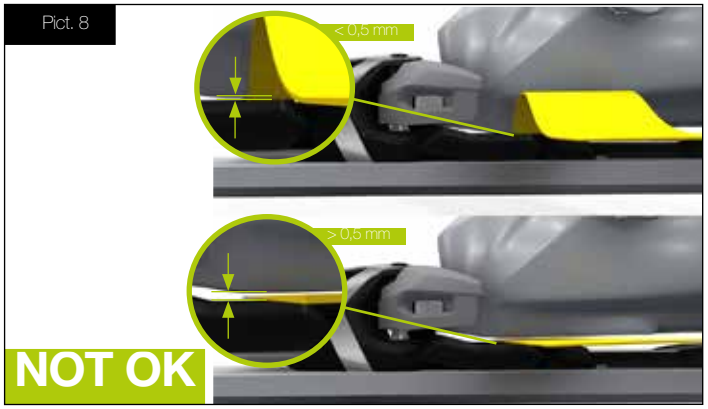
Adjust the AFD with the screw on the top so that the tester is still moveable but with a slight resistance. In this case, you reached a gap of 0.5 mm between AFD and the boot (Pict. 7).

Pict. 7



If the tester is not moveable, the gap is smaller than 0.5 mm, if you feel no resistance the gap is more than 0.5 mm. In both cases you need to re-adjust the AFD (Pict. 8).

Pict. 8



5.2. FOR TWO-PIECE BINDINGS

Hook the brake into heel housing and place the binding over the predrilled holes and tighten the screws in a cross pattern.

5.2.1. BINDINGS with AFS JUNIOR - AC models

All binding models marked with AC are suitable for both adult (type A) and children (type C) boots: the innovative mechanical Anti Friction Slider (AFS) automatically adjusts to the boot sole height, compensating A/C standards as well as height differences due to icing up, dirt or boot wear (Pict. 9).

Pict. 9

If you want to increase the stability of your junior binding in combination with children (type C) boots, e.g. for junior racing, you can replace the standard AFS with a vertically blocked AFS (Art. No. 162962), which is for children (type C) boots ONLY. All you have to do is to separate the standard slider from the base plate and you can simply click in the spare slider (Pict. 10).

Abb. 10

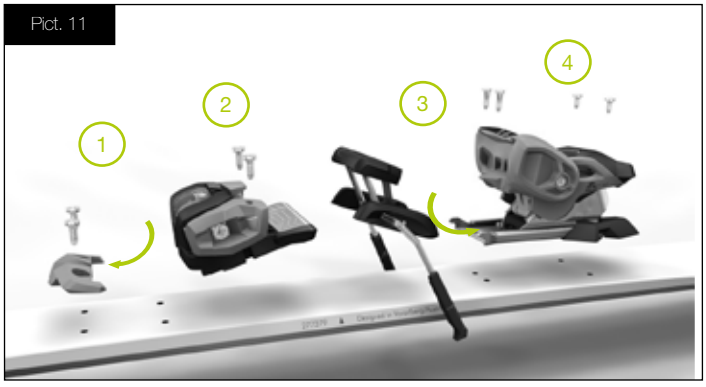
MOUNTING OF JUNIOR BINDINGS ON PLATES AND ON SKIS, GROUP G1 & G2

For mounting junior bindings on plates or on skis, group G1 & G2, replace the pre-mounted screws by 8 mm penetration depth screws. Only with these screws is the right pullout strength guaranteed.

5.3. FOR ATTACK² BINDINGS

For mounting the toe unit at Attack² bindings, place the mounting part over the front 2 drilled holes and tighten the screws. Now slide the toe unit from the rear over the mounting part and fasten the screws. Go on by mounting the heel unit. Hook the brake into heel housing and place the heel unit over the predrilled holes and tighten the screws in a cross pattern. (Pict.11)

Pict. 11



5.3.1. SOLE HEIGHT ADJUSTMENT

The new Attack² GW is designed for use with alpine- (TYPE A) and GripWalk soles. The Attack² 14 AT provides full AT adjustability for alpine and touring boots, including GripWalk, Walk sole and Walk To Ride.

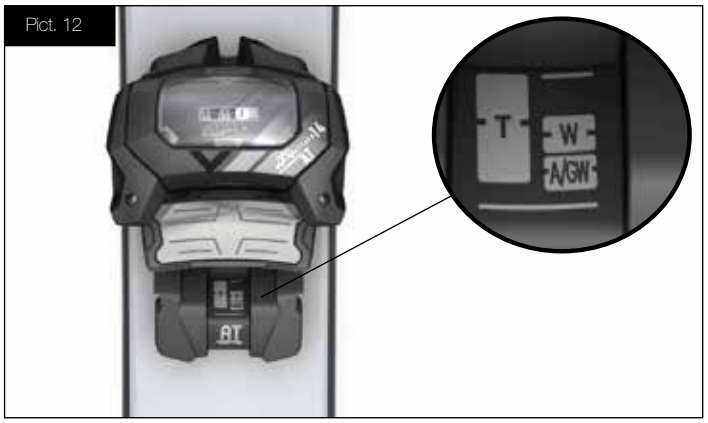
	ISO 5355	TOURING - ISO 9523		
	Alpine Adult (A)	GripWalk (GW)	Walk Sole/ Walk To Ride (W)	Touring (T)
ATTACK² 11 GW	X	X	O	O
ATTACK² AT (18.0x, 16, 13)	X	X	X	X

x...suitable o...not suitable

For proper function the height of the AFD must be adjusted to the height of the boot sole. ELAN recommends using the “ELAN boot height adjustment tester” (Art. No. 162983) to get the ideal distance of 0.5 mm between boot and AFD.

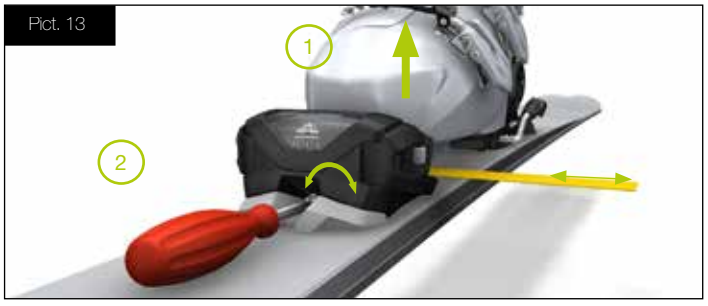
For Attack² 14 AT please use the A/GW (Alpine and GripWalk), W (Walk sole and Walk To Ride) and T (Touring) markings for rough adjustment. (Pict. 12)

Pict. 12



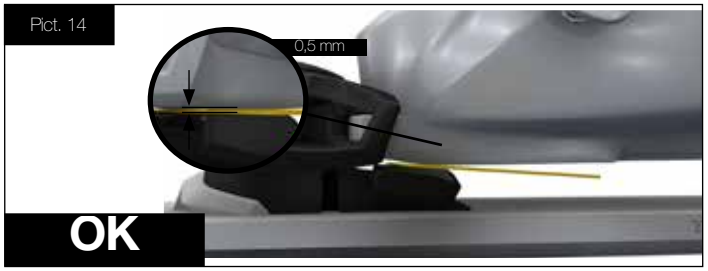
Turning the adjustment screw at the toe moves the AFD up or down. Place the tester on the AFD and enter the boot in the binding. Lift the tip of the boot to take out the play of the toe. (Pict. 13)

Pict. 13



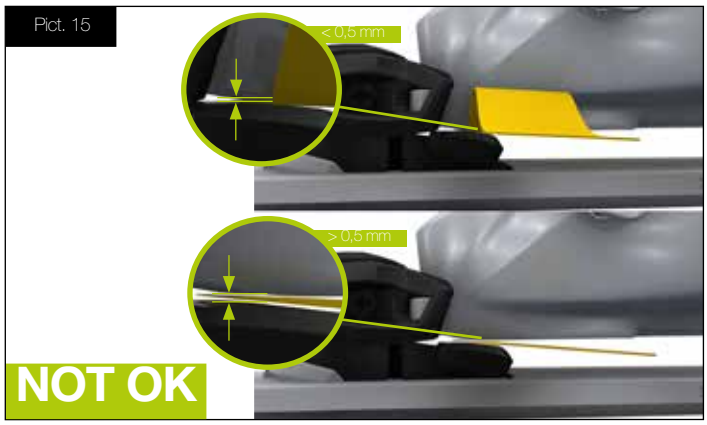
Adjust the AFD with the screw in the front so that the tester is still moveable but with a slight resistance. In this case, you reached a gap of 0.5 mm between AFD and the boot (Pict. 14).

Pict. 14



If the tester is not moveable, the gap is smaller than 0,5 mm, if you feel no resistance the gap is more than 0.5 mm. In both cases you need to re-adjust the AFD. (Pict.15)

Pict. 15



6. FORWARD PRESSURE

Make sure that the boot meets international standards and is not damaged. Place the boot in the binding and close it. The indicating pointer should rest within the marked area (Pict. 16)

if not, you have to adjust the forward pressure.

Pict. 16

DON'T OPEN THE LENGTH ADJUSTMENT LOCK AS LONG AS A SKI BOOT IS FIXED IN THE BINDING!

Place the ski boot in the open binding and rest the boot heel on the brake pedal. Lift the length adjustment lock with a screwdriver and slide the heel until the heel cup just touches the boot. Lock the length adjustment by pushing it down.

Latch the boot in the binding and check forward pressure again.The toe pincers should not be pressed open and the indicating pointer should rest within the marked area.

7. ADJUSTING THE RELEASE VALUES

The release values of the toe and heel should be determined by height and body weight (ISO/ASTM) method. Set the binding accordingly with the adjustment screws at heel and toe unit. ELAN recommends adjusting these settings with a manual screwdriver.

Do NOT use a screw shooter!
We also recommend the use of a calibrated testing device and that you keep a written record of whether the system passes or fails (requirement in the US).

NOTE: Release/retention settings above a release moment of 105 NM at the toe and 452 NM at the heel are higher than the international standards recommend and are used solely at the skier's own risk!

8. FUNCTION CHECK

ENTRY/EXIT: Check to make sure that the boot does not catch on the heel hold down lug.

BRAKE: press the brake pedal down by hand. The brake arms must automatically return to the braking position when the pedal is released.

LATERAL ELASTICITY OF THE TOE
Press the boot laterally outward. The binding must re-center the boot easily and quickly from a 15 mm lateral displace- ment (junior bindings – 10 mm).

9. FINAL CHECK

- Has the proper mounting point been selected?
- Functional brake test passed?
- Have all screws been fastened tightly?
- Was the boot sole height adjusted correctly?
- Has the forward pressure been properly set?
- Are the release values of the toe and heel properly determined and set?
- Is the instruction for use booklet ready to be handed over to the consumer?

MOUNTING

DRILL TEMPLATE AMBITION

Drill Template AMBITION
Art.No. 163000

Plastic Foil Template AMBITION
Art.No. 163011

1. COMPATIBILITY

Presently the drill template AMBITION can be used for:

BINDINGS:
AMBITION 12 AT

All Ambition bindings come with 8 mm penetration screws and can be used with skis of groups G1 & G2. If recommended by the ski manufacturer use shorter screws with a penetration depth of 6 mm. Therefore use the spare part "Ambition Screw Set - G3 & G4 (6 mm) Art. No. 163055".

Drill template Ambition can be used for ski widths from 75 to 125 mm. For other skis use the template adapter set (Art. No. 162569). With this adapter set, skis from 61 to 149 mm can be mounted. Alternatively, the use of the attached plastic foil template is also an option.

NOTE: ELAN offers different types of brakes. Refer to the brake overview on page 29 for brake and binding compatibility. The description of the brakes always includes a number and a color-letter code. This number stands for the maximum ski width in the brake area and not in the ski center! The color letter code defines the brake segment.

2. POSITIONING OF THE TEMPLATE

There are two ways to mount Ambition bindings. Either with the solid jig (Art. No. 163000) or with the plastic foil template (Art.No. 163011) , which is included in the packaging of each binding. We will show both procedures. First of all, make sure that the boot is satisfying the international standards and has no functional damage. Determine the boot sole length with the rental caliper (Art. No. 162617).

Pict. 18

NOTE: Keep in mind that some ski manufacturers do not use the center of boot sole location method. Always follow their instructions.

2.1. DRILL TEMPLATE

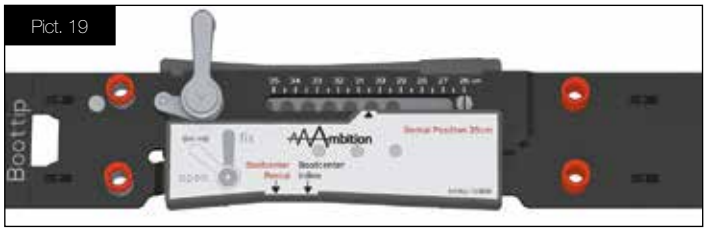
Adjust the boot sole length on the template - open it by pull- ing the locking lever (1) to the left position. Slide the template to the right length position and push the locking lever (1) to middle position. Slide the template to closest centimeter mark, until it snaps into position.

Please use following length markings for Rental versions:

Version	Length position
Ambition Rental	35 cm

Place the template on the ski and center the jig. Therefore open the clamping jaws (2) by rotating the clamping handles (3) and then place the template on the ski. Select the right midsole indicator on the template (Black for RETAIL or Red for RENTAL version), align the indicator with the midsole mounting mark on the ski.

Pict. 19



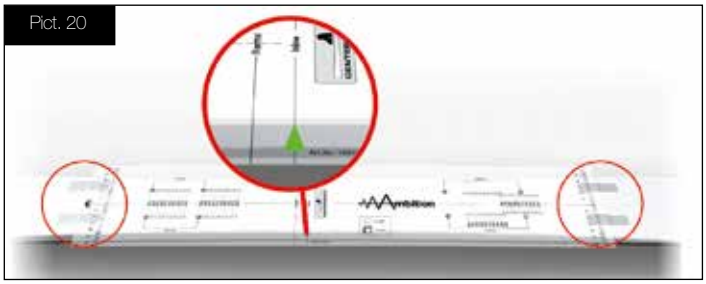
Release the handles and ensure that the template is evenly seated against the ski's top surface. Select the right holes! The front holes are identical for all versions (Retail and Rental - red-silver bushings). You just have to select the right bushings for the rear holes:

Version	Color of bushings/Indicators
Ambition Retail	silver
Ambition Rental	red

2.2. PLASTIC FOIL TEMPLATE

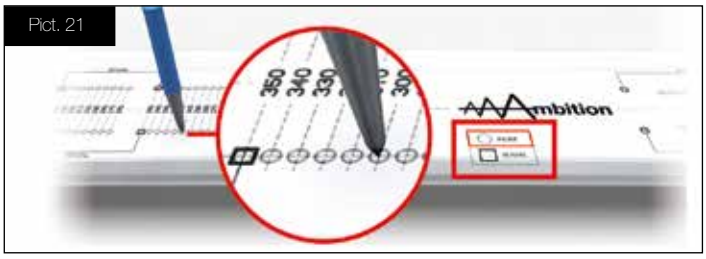
Follow the same procedure with the plastic foil template – place it on the ski, align the correct boot mid sole mark with the ski mounting mark. Fix it with a sticky tape and ensure that the template is centered and evenly seated against the ski's top surface.

Pict. 20



After that, you can mark the correct positions with a punch (Pict. 21) for front and rear position. Remove the plastic foil template from the ski surface.

Pict. 21



3. DRILLING THE HOLES

If not otherwise specified by the ski manufacturer, use a 4.1 Ø x 9 mm drill bit for the toe and the heel track (8 holes) if required by the ski manufacturer, tap the holes. After drilling, place a drop of glue into the holes. It lubricates the screws and seals the holes.

4. MOUNTING

Just start with mounting the heel unit of the binding depending on the version.

4.1. HEEL UNIT

4.1.1. RETAIL VERSION – HEEL UNIT

Place the heel unit over the rear holes and fasten all screws in a cross pattern and continue at 4.2. (Pict. 22)

Pict. 22

4.1.2. RENTAL VERSION – HEEL UNIT

Start with placing the Demo Track over the holes and fasten all screws in a cross pattern. Use the screws provided with the binding. (Pict.23)

Pict. 23

Insert the screw in the bottom side of the heel unit, and slide the whole unit to the closest mounting position on demo track and fix it with the screw.

Pict. 24

4.2. MOUNTING OF THE TOE UNIT

If you are mounting the RENTAL version, the dampener has to be changed (white damper out and black one in).

Pict. 25

From now on the mounting is the same in RETAIL and RENTAL version. Start with the Adjustment of the telescopic tube to the closest mounting position and fix it with the screw.

Pict. 26

Close the ascender lock and slide the binding into the closed position in all versions.

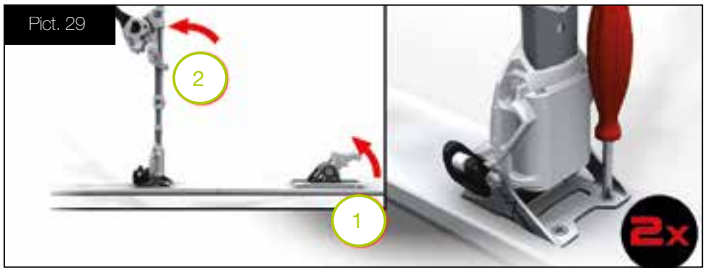
Pict. 27

Place the toe unit assembly over the front holes and fasten the two front screws.

Pict. 28

Open the ascander lock and tighten the other two screws of the toe unit.

Pict. 29



!!!ATTENTION!!! Ambition binding are sold without brakes. Please choose the proper brake width for your ski and mount it on the binding. You can also use it to ride and hike with the appropriate powder straps. It is required to use one of these options (in reference to ISO 11088)!!

A.No	Spareparts
163003	Brake AMBITION 85 (C) (1 pair)
163016	Brake AMBITION 95 (C) (1 pair)
163004	Brake AMBITION 105 (C) (1 pair)
163005	Brake AMBITION 125 (C) (1 pair)
162981	AAA-Series Powder Strap (1 pair)

4.3 MOUNTING OF THE BRAKES

Remove the heel base plate – therefore remove both screws completely. Pop out the plate with a flat screwdriver.

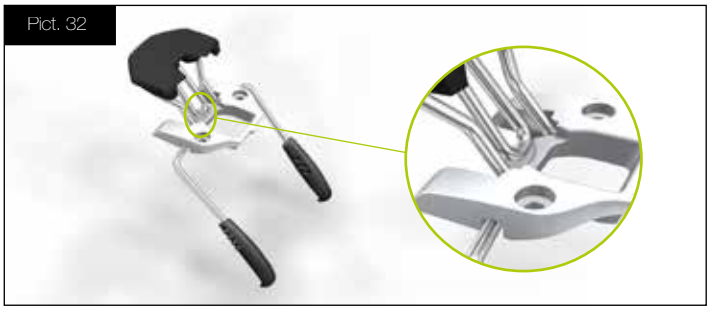
Pict. 30

Take the Ambition brake arm, press it together and clap the brake pedal to a horizontal position. First click right then left side into place.

Pict. 31

Check the right position of the brake.

Pict. 32



Place the brake to its position on the heel unit, push the plate to lock on binding. Fix the plate with the two screws. Ready!!!

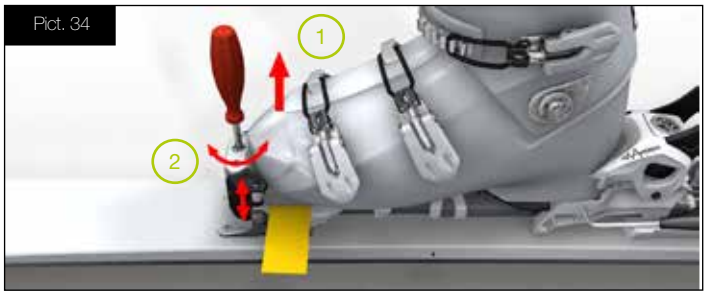
Pict. 33

5. SOLE HEIGHT ADJUSTMENT

The Ambition is designed to accommodate both type of boots - ALPINE SKI BOOTS (according to DIN/ISO 5355) and TOURING BOOTS (according to DIN/ISO 9523). For proper function the height of the toe unit must be adjusted to the height of the boot sole. ELAN recommends to use the "boot height adjustment tester" (Art. No. 162983) to get the ideal distance of 0.5 mm between boot and AFS.

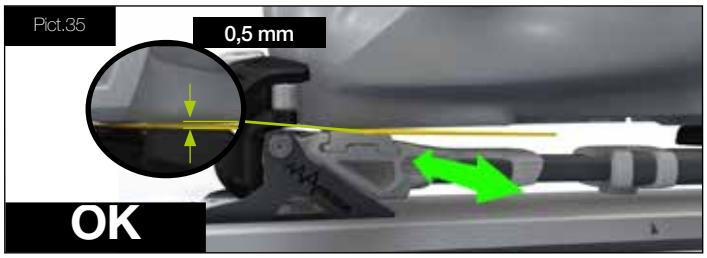
Turning the adjustment screw at the toe moves the unit up or down. Place the tester on the AFS and enter the boot in the binding. Lift the tip of the boot to take out the play of the toe.

Pict. 34



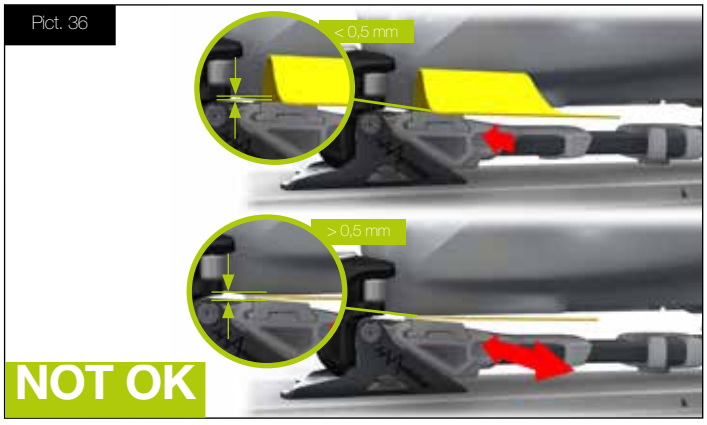
Adjust the AFS with the screw in the front so that the tester is still moveable but with a slight resistance. In this case, you reached a gap of 0.5 mm between AFS and the boot.

Pict.35



If the tester is not moveable, the gap is smaller than 0,5 mm, if you feel no resistance the gap is more than 0.5 mm. In both cases you need to re-adjust the AFS.

Pict. 36



6. FORWARD PRESSURE

Check the forward pressure, by placing a boot into the binding. If you have followed all mounting steps correctly, the indicator and the heel housing should be on a flat surface.

If you have too much or not enough forward pressure, check the settings and if necessary re-adjust the heel.

Pict. 37

7. ADJUSTMENT OF THE RELEASE VALUES

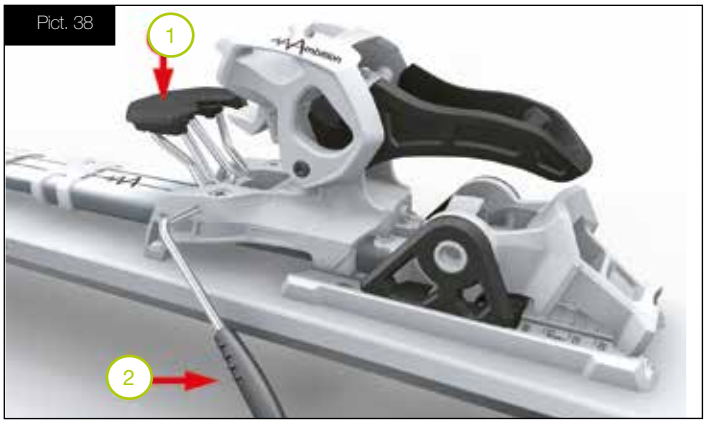
The release values of the toe and heel should be determined by height and body weight (ISO/ASTM) method. Set the binding accordingly with the adjustment screws at heel and toe unit. ELAN recommends adjusting these settings with a manual screwdriver. Do NOT use a screw shooter. We also recommend the use of a calibrated testing device and that you keep a written record of whether the system passes or fails (requirement in the US).

NOTE: Release/ Retention settings above a release moment of 105 NM at the toe and 452 NM at the heel are higher than the international standards recommend and are used solely at the skier's own risk!

8. FUNCTION CHECK

Check the function of the heel. Make sure that the boot does not catch on the heel during entry and exit. Check the brake function (Pict. 38) by pressing down the brake pedal (1) by hand. The brake arms (2) must open to the braking position when the brake pedal is released. Check the elasticity and retention of the toe by pushing the boot inward and outward. The binding must recenter the boot easily and quickly from a 15 mm lateral displacement.

Pict. 38



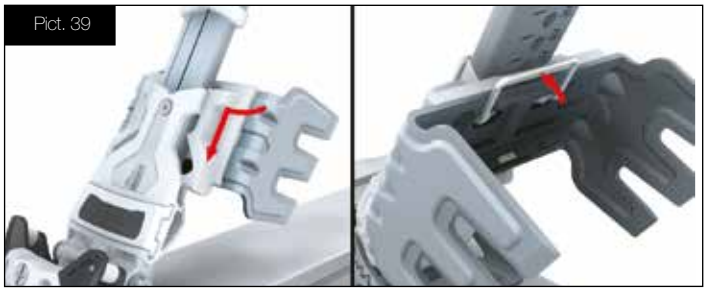
9. ADDITIONAL EQUIPMENT AND SPARE PARTS FOR AMBITION:

9.1. AMBITION CRAMPONS

ELAN is offering additional crampons for AMBITON Bindings. Use the crampons in icy and hard snow conditions to provide safe climbing and a secure stance in any situation. Be sure to use the right width - 90 mm (Art.No. 163006), 105 mm (Art.No. 163007) or 120 mm (Art.No. 163008).

MOUNTING: Open the climbing aid and swing open the binding. Take the crampon and slide it to the fixing- position on the bottom of the telescopic tube. Consider the right position as shown in pict. 39. Lock the crampon with the lever- ready!

Pict. 39



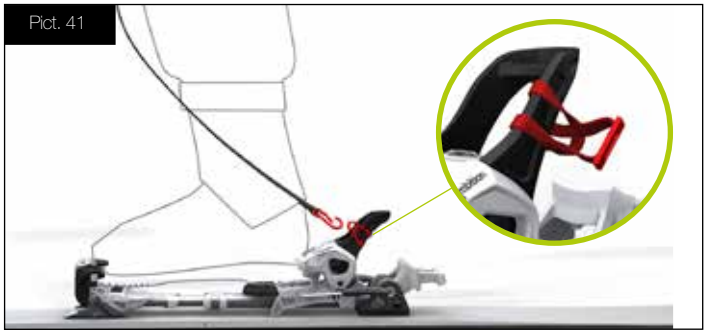
To remove just unlock the crampon with the lever and take off the crampon from the telescopic tube (Pict. 40).

Pict. 40

9.2. A-SERIES POWDER STRAP

Instead of brakes it is also possible to use the A-Series powder strap for riding and hiking. At Ambition bindings it is required to use either brakes or powder strap! To fix the strap on your binding take the hanger from the strap and fix it on the heel lever as shown in pict. 41.

Pict. 41



Fix the strap with the Velcro fastener on your leg and use the carabiner to connect strap and hanger again.

10. FINAL CHECK

- Has the proper mounting point selected?
- Brake or Powder Strap mounted?
- Functional brake test passed?
- Are all screws fastened tightly?
- Was the boot sole height adjusted correctly?
- Is the forward pressure properly adjusted?
- Are the release values of the toe and heel properly determined and set?
- Is the instruction for use booklet ready to be handed over to the consumer?

MOUNTING

DRILL TEMPLATE ATTACK DEMO

Drill Template ATTACK DEMO
Art.No.163009

Plastic Foil Template AATTACK DEMO
Art.No. 163015

1. COMPATIBILITY

Presently the drill template ATTACK DEMO can be used for:

BINDINGS:
ATTACK² 13 AT DEMO, ATTACK² 11 AT DEMO

All Attack² AT Demo bindings come with 8 mm penetration screws and can be used with skis of groups G1 & G2. If recommended by the ski manufacturer use shorter screws with a penetration depth of 6 mm. Therefore use the spare part "Screw Set Attack 11/13 AT Demo – G3 & G4 (6 mm)" (Art. No.163091).

Drill template Attack Demo can be used for ski widths from 75 to 125 mm. For other ski widths please use the template adapter set (Art. No. 162569). With this adapter set skis from 61 to 149 mm can be mounted.

NOTE: ELAN offers different types of brakes. Refer to the brake overview on page 31 for brake and binding compatibility.

The description of the brakes always includes a number and a color-letter code. This number stands for the maximum ski width in the brake area and not in the ski center! The color letter code defines the brake segment.

2. POSITIONING OF THE TEMPLATE

There are two ways to mount Attack Demo bindings. Either with the solid jig (A.No. 163009) or with the plastic foil template (this is included in the packaging of each binding and also available as a spare part A.No. 163015). We will show both procedures.

NOTE: Keep in mind that some ski manufacturers do not use the center of boot sole location method. Always follow the ski manufacturer's instructions.

2.1. DRILL TEMPLATE

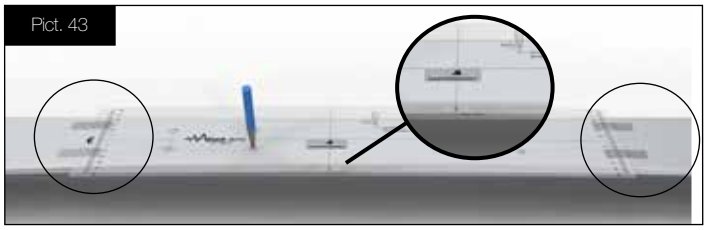
Open the clamping jaws (2) by rotating the clamping handles (1) and then place the template on the ski. Align the boot midsole indicator (3) with the midsole mounting mark on the ski. Release the handles and ensure that the template is evenly seated against the ski's top surface.

Pict. 42

2.2. PLASTIC FOIL TEMPLATE

Align the boot midsole indicator with the midsole mounting mark on the ski. Fix it with a sticky tape and ensure that the template is centered and evenly seated against the ski's top surface. After that you can mark the indicators (8x) with punch and remove the plastic foil template from the ski surface.

Pict. 43



3. DRILLING THE HOLES

If not otherwise specified by the ski manufacturer use a 4.1 Ø x 9 mm drill bit for all holes (8x) for the toe and the heel track.

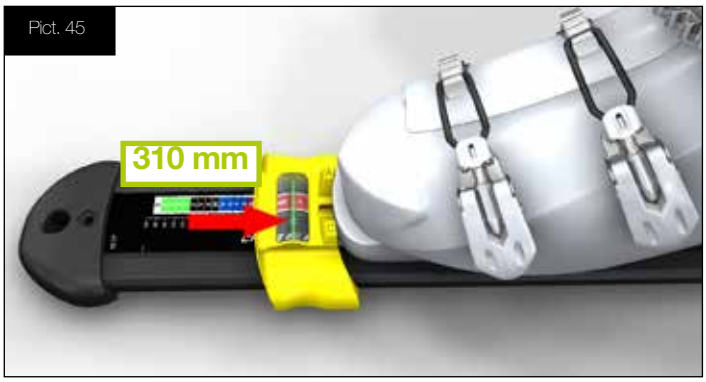
Pict. 44

After drilling place a drop of glue into the holes. It lubricates the screws and seals the holes.

4. MOUNTING

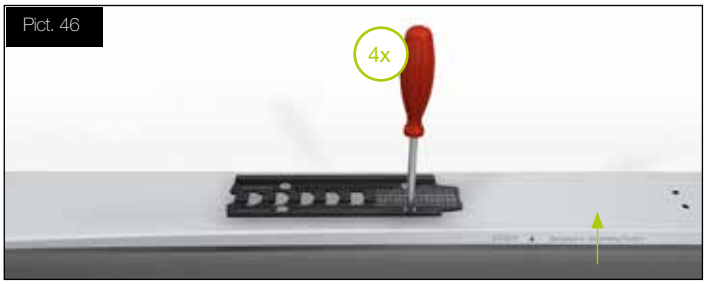
First of all, make sure that the boot is satisfying the international standards and has no functional damage. Determine the boot sole length with the rental caliper (A.No. 162 617).

Pict. 45



Go on with placing the toe track over the holes and fasten all screws in a cross pattern.

Pict. 46



Open the one-touch lever and slide the toe unit from the front on the track and lock it at the appropriate boot sole marking.

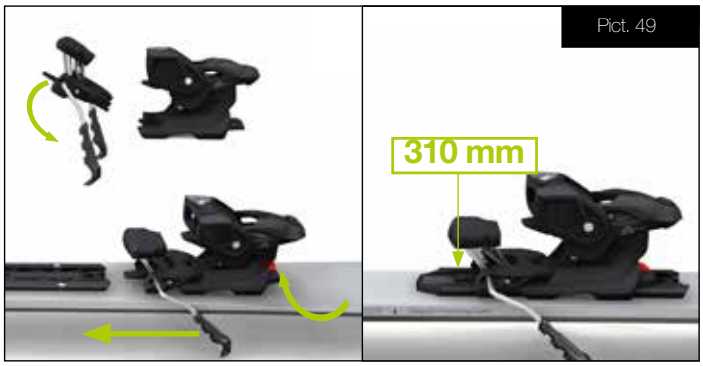
Pict. 47

Now you can mount the heel unit. Place the heel track over the holes and fasten all screws in a cross pattern.

Pict. 48

Now hook the brake into the heel, open the one touch lever, slide the heel unit from the back to the track and lock it at the appropriate boot sole marking.

Pict. 49



5. SOLE HEIGHT ADJUSTMENT

The new Attack² AT DEMO provides full AT adjustability for alpine and touring boots, including GripWalk, Walk sole and Walk To Ride.

	ISO 5355	TOURING - ISO 9523		
	Alpine Adult (A)	GripWalk (GW)	Walk Sole Walk To Ride (W)	Touring (T)
Attack² AT DEMO	X	X	X	X

x...suitable o...not suitable

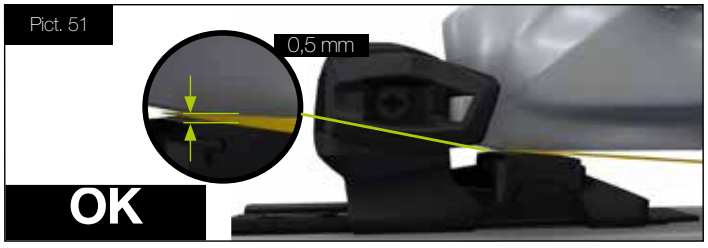
For proper function the height of the AFS must be adjusted to the height of the boot sole. ELAN recommends using the "boot height adjustment tester" (Art. No. 162983) to get the ideal distance of 0.5 mm between boot and AFS. Turning the adjustment screw at the toe moves the AFS up or down.

Place the tester on the AFS and enter the boot in the binding. Lift the tip of the boot to take out the play of the toe. Adjust the AFS with the screw in the front so that the tester is still moveable but with a slight resistance.

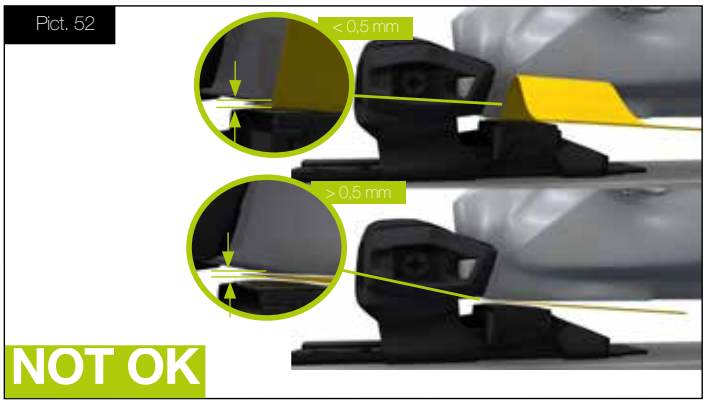
Pict. 50

In this case, you reach a gap of 0.5mm between AFS and the boot.

Pict. 51



If the tester is not moveable, the gap is smaller than 0,5 mm, if you feel no resistance the gap is more than 0.5 mm. In both cases you need to re-adjust the AFS.



6. FORWARD PRESSURE

Check the forward pressure, by placing a boot into the binding. If you have followed all mounting steps correctly, the indicator should rest in the marked area and you are ready to go.

If you have too much or not enough forward pressure, check the settings and if necessary re-adjust the heel. Then close the lever and check the forward pressure again. Now it should be okay!

7. ADJUSTMENT OF THE RELEASE VALUES

The release values at toe and heel should be determined by height and body weight (ISO/ASTM) method. Set the binding accordingly with the adjustment screws.

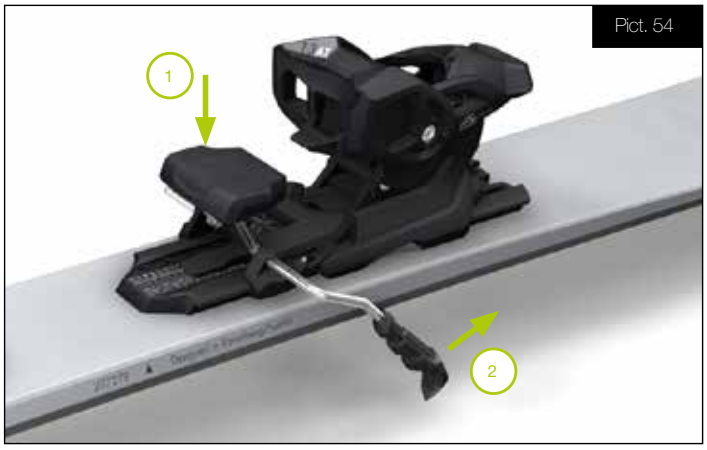
We recommend the use of a calibrated testing device and that you keep a written record of whether the system passes or fails (requirement in the US).

NOTE: Release/ Retention settings above a release moment of 105 NM at the toe and 452 NM at the heel are higher than the international standards recommend and are used solely at the skier's own risk!

8. FUNCTION CHECK

Check the function of the heel. Make sure that the boot does not catch on the heel during entry and exit. Check the brake function by pressing down the brake pedal (1) by hand. The brake arms (2) must open to the braking position when the brake pedal is released.

Check the elasticity and retention of the toe by pushing the boot inward and outward. The binding must recenter the boot easily and quickly from a 15 mm lateral displacement.



9. FINAL CHECK

- Was the proper mounting point selected?
- Did it pass the functional brake test?
- Are all screws fastened tightly?
- Was the boot sole height adjusted correctly?
- Is the forward pressure properly adjusted?
- Are the release values of the toe and heel properly determined and set?
- Is the instruction for use booklet ready to be handed over to the consumer?

MOUNTING

DRILL TEMPLATE BASES & PLATES

Drill Template Bases & Plates
Art.No. 162 865

1. COMPATIBILITY

Presently the drill template Bases & Plates can be used for:

PLATES:
EP 9.0, EP 9.0+, Twin PR Base

Drill template BASES & PLATES is for mounting of all types of plates and bases, except the RACEPLATES and the SUPERLITERAIL II (sizes S, L). All bases and plates come with 8 mm penetration depth screws. For the SUPERLITERAIL bases the right screws has to be used according to the ski specification. Drill template BASES & PLATES can be used for ski widths from 59 to 108 mm. For other skis use the template adapter set (Art. No. 162569). With this adapter set skis from 45 to 132 mm can be mounted. The following chart shows which ELAN bases and plates are suitable for the different ski-groups (G1-G4).

Model	G1	G2	G3	G4
TWIN PR BASE	x	x	x	o
ULTRAFLEX PLATE 9	x	x	o	o
POWERPRO PLATE 9	x	x	o	o

x ...suitable o ...not suitable

If bases and plates are mounted on other ski groups, the penetration depth and the torque moment of the screws have to be verified.

2. POSITIONING OF THE DRILL TEMPLATE

Open the clamping jaws (3) by rotating the clamping handles (1) and then place the template on the ski. Align the boot midsole indicator (2) for the appropriate model with the midsole mounting mark on the ski. Be sure the template is evenly seated against the ski's top surface. Release clamping handles.

NOTE: Keep in mind that some ski manufacturers do not use the center of boot sole location method. Always follow the ski manufacturer's instructions.

3. DRILLING THE HOLES

If not otherwise specified by the ski manufacturer, for all bases use a 4.1 Ø x 9.0 mm drill bit for skis, groups G1 & G2. For skis of, groups G3 & G4, use a 4.1 Ø x 7.0mm drill bit.

DRILL THROUGH THE APPROPRIATE BUSHINGS

Model	Color of bushings/indicatorS
EP 9.0 EP 9.0+	red
TWIN PR BASE	white

After drilling place a drop of glue into the holes. It lubricates the screws and seals the holes.

4. PLATES

4.1. MOUNTING - PLATES

The compatible binding-plate combinations can be found in the compatibility chart (see next page). Place the front part of the plate over the holes and fasten the screws. Then place the back part over the holes and fasten the screws.

Pict. 55

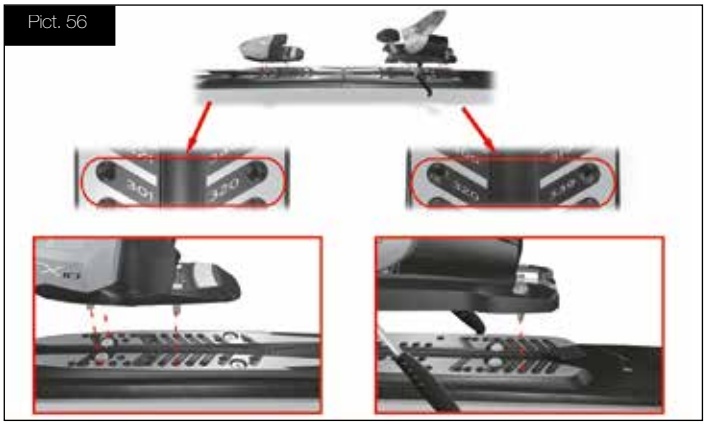
4.2. MOUNTING - BINDING ON PLATES

For mounting junior bindings on PLATES, you have to replace the pre-mounted screws by screws of 8 mm penetration depth. The right pullout strength can only be ensured with these screws.

NOTE: Use only the pre-drilled holes for installation – do not drill holes into the plate to mount bindings of other manufacturers.

Determine the boot sole length with the Rental boot caliper and place the binding on the plate corresponding with the appropriate printed length markings. Mount the binding in accordance with the procedures in this manual.

Pict. 56



MOUNTING BINDINGS ON RAISED PLATFORMS:

Please note the ELAN brake-matrix on the next page. There you will find a classification of all our brakes depending on stand height and weight. A brake is permitted, if the combination of stand height and weight hits the sector under the relevant curve. If not the brake has to be changed by a stronger one of a higher category.

At all current ELAN ski sets with ELAN binding- plate-systems the included brakes fit these requirements. If you are combining ELAN bindings and plates with product of other manufacturer please check the technical requirements of the ski – plate – binding – combination at the ELAN brake matrix on next page. There you will find out, if the desired combination of ski- plate-binding is accepted.

FOLLOW THE PROCEDURE BELOW:

1. Add the weight of the components you want to mount (ski + plate + binding).
2. Add the thickness of the components you want to mount (ski + plate + binding).
3. Find the value on the vertical axis which corresponds to the sum of the addition for the stand height.
4. Follow the horizontal axis on the matrix to the right until you find the value which corresponds to the total weight on the horizontal axis.
5. Use the lists at chapter "Technical Information" (page 9 et seqq.), determine the standard brakes of the binding and based on this information select the right curve at the matrix.
6. If the point of intersection of the weight and stand height lies below the respective curve, the brake will work properly.
7. If the point of intersection lies above the curve the brake must be replaced with the next stronger one.
8. If the point of intersection lies above the highest curve this combination of ski + binding + plate is not recommended. In this case, you have the following possibilities to come within the permitted range:

a) Reduce the total thickness through:
- a thinner plate
- A binding with less stand height

b) Reduce the total weight to
- a lighter plate
- A binding with less weight
- a lighter ski

c) Use a combination of a) + b)

Have a look at all technical specifications about ELAN bindings and plates in chapter "Technical Information" – this will help you in finding an accepted combination.

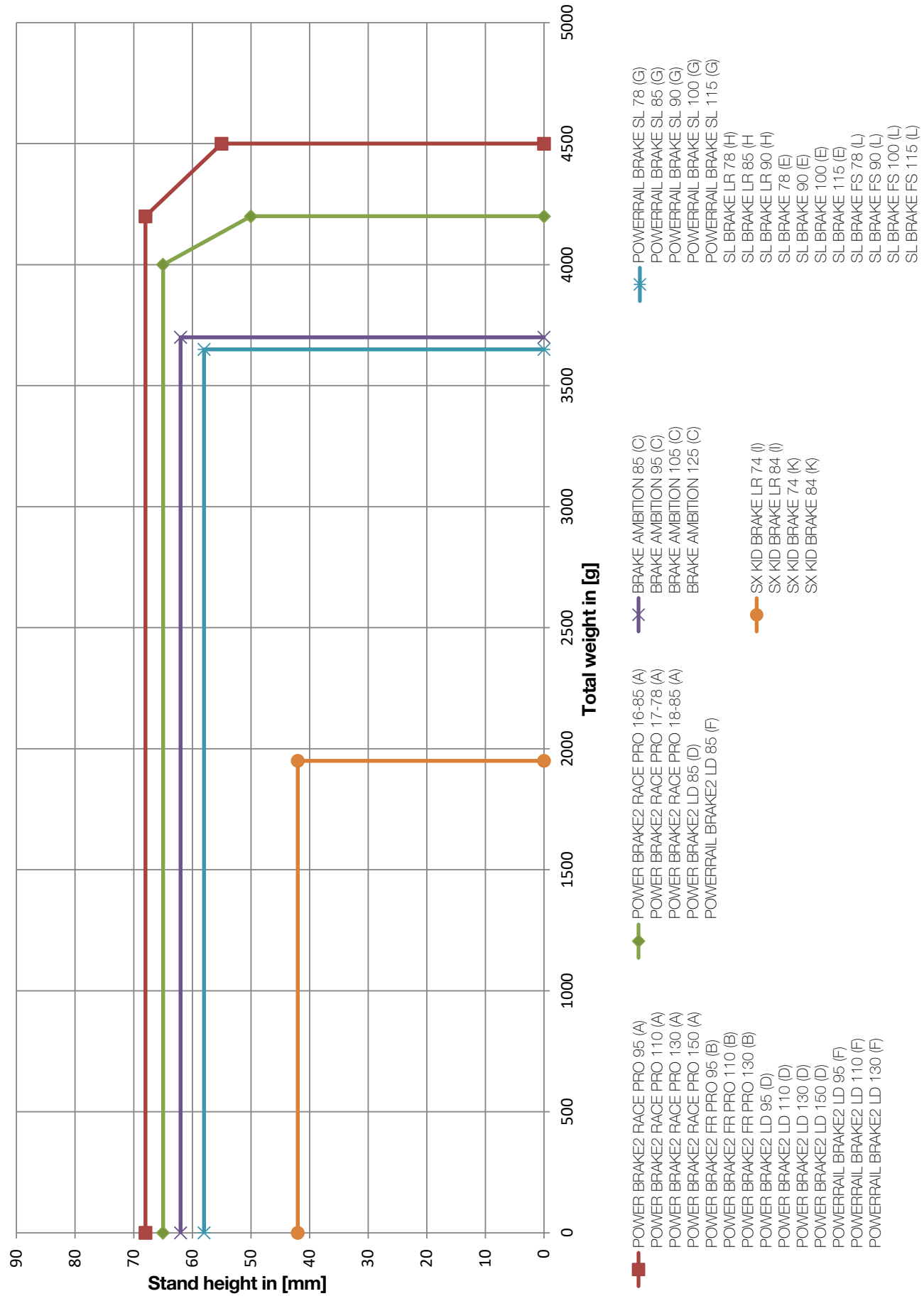
4.3 ELAN BINDING-PLATE COORDINATION 2018/19

Height: Mounting Range: Mounting Range (SX):	**EP 14.0 WC (Raceplate RDX) 14mm**	**EP 9.0+ 9mm 258-372mm 261-363mm**	**EP 9.0 9mm 258-372mm 261-363mm**	**EP 11.5 DUO 11,5mm 238-342mm 241-353mm**
BINDING	**STAND HEIGHT [mm]**			
ER 20.0 (X) FreeFlex EVO RD ER 16.0 (X) FreeFlex EVO RD	30.0	x	x	x
ER 17.0 FreeFlex EVO	31.0	26.0	26.0	28.5.
ER 14.0 FreeFlex EVO ER 11.0 FreeFlex EVO ER 11.0	35.0	30.0	30.0	32.5
EFS 10.0 EL 10.0 EL 7.5	35.0	30.0	30.0	32.5
ESP 10.0 ESP 7.5 AC	45.0*	40.0	40.0	x
ESR 10.0	36.0*	x	31.0	x

x ...not suitable

*if plate is mounted in silver position (290-350mm)

4.4. ELAN BRAKE MATRIX 2018/19



5. QUICKTRICK SYSTEM

The QuickTrick system meets the demands of adult skiers, while being perfectly suited for both retail and rental sectors! ELAN offers different types of bases. All of them are indicated with a PR in their name.

The PR Bases are suited for boot sole length of 255 up to 378 mm.

BINDINGS:
EL 10.0 GW QUICK TRICK

NOTE: ELAN offers different types of brakes for QuickTrick bindings. Refer to the brake overview on page 31 for brake and binding compatibility.

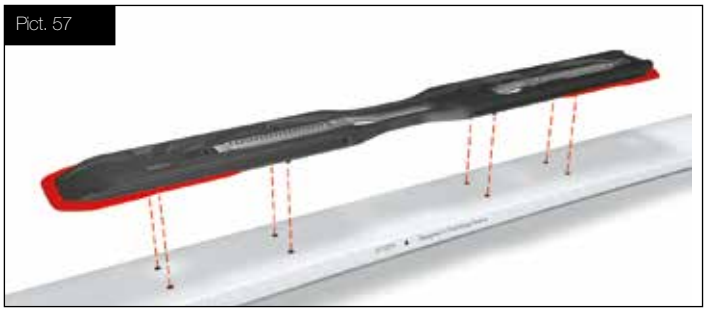
The description of the brakes always includes a number and a color-letter code. This number stands for the maximum ski width in the brake area and not in the ski center! The color letter code defines the brake segment.

5.1. MOUNTING - BASE

If the base is not already pre-mounted on the ski, you have to use the template Bases & Plates to mount it. Just select the right mounting mark and the appropriate bushings – as listed on page 61: the white mark and the silver bushings for QuickTrick System.

The procedure is similar as for plates - just follow the instructions on page 61. After drilling, cleaning, tapping and lubricating you can put on the base. Place it over the holes and tighten all screws (Pict. 57).

Pict. 57



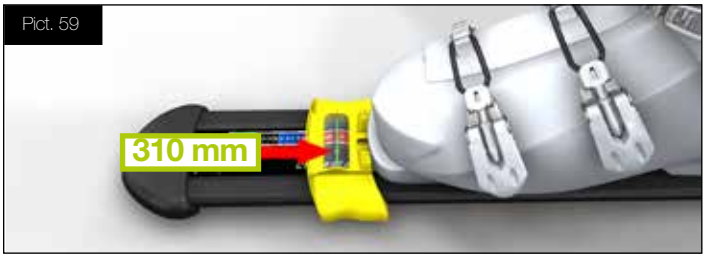
Finally you can snap in the appropriate cover (Pict 58).

Pict. 58

5.2. MOUNTING - BINDINGS

Make sure that the boot is satisfying the international standards and has no functional damage. Take the binding parts out of the box and follow the steps on the instruction leaflet. Determine the boot sole length with the rental caliper (Art. No. 162617).

Pict. 59



FIRST INSTALLATION

Open the toe-lever and slide the toe on the rail from the front. Lock at the appropriate boot sole length and close the lever.

Pict. 60

Now hook the brake into the heel housing.

Pict. 61

Then open the heel lever, slide the heel on the rail from the back and lock it at the appropriate boot sole marking. Don't forget to check that the lever is closed again.

Pict. 62

Finally, check the forward pressure, by placing a boot into the binding. If you have followed all steps correctly, the indicator should rest in the marked area.

Pict. 63

If you have too much or not enough forward pressure, check the settings and if necessary, adjust slightly at the heel and the toe. Then close the levers and check the forward pressure again. Now it should be okay.

Pict. 64

ADAPTATION:

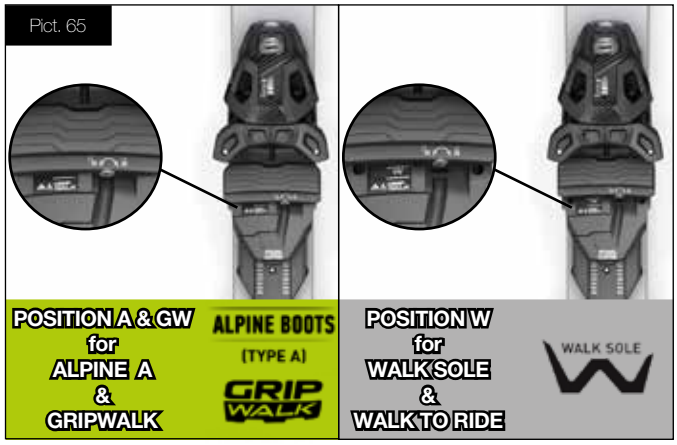
Once the binding is mounted onto a ski it is very easy to adjust it to another boot sole length. Just open the levers and slide toe and heel to the desired length mark. Finally close the levers and check forward pressure as described before.

5.3. HEIGHT ADJUSTMENT - MBS BINDINGS

All MBS models are suitable for Alpine (ISO 5355), GripWalk and Walk Sole/Walk To Ride ski boots. For proper function the AFS must be adjusted correctly to the boot.

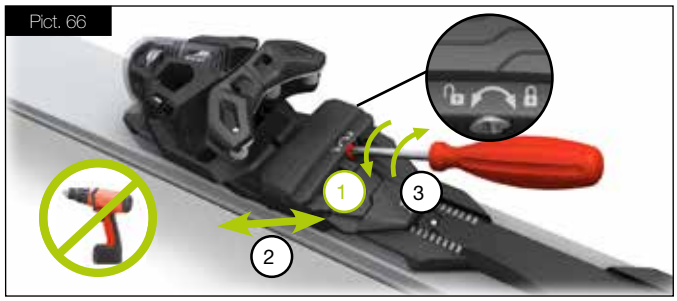
Use position A/GW for Alpine and GripWalk and position W for Walk Sole/Walk To Ride.

Pict. 65



Adjustment is simple and easy: Just open the fixing screw by hand (only a quarter turn) (1), move the slider to the appropriate position (2) and then close the fixing screw (3) (Pict.66). No further adjustments or fine tuning with a paper strip are necessary.

Pict. 66



5.4. MAINTENANCE & SERVICE

To provide unaffected long-term performance of the new POWER binding models, the toe and heel guides can be exchanged or retrofitted. These features ensure that steady function is guaranteed, even after massive use in rental. (For more details see page 47).

6. ADJUSTMENT OF THE RELEASE VALUES

The release values of the toe and heel should be determined by height and body weight (ISO/ASTM) method. Set the binding accordingly with the adjustment screws at heel and toe unit. ELAN recommends adjusting these settings with a manual screwdriver. Do NOT use a screw shooter. We also recommend the use of a calibrated testing device and that you keep a written record of whether the system passes or fails (requirement in the US).

NOTE: Release/Retention settings above a release moment of 105 NM at the toe and 452 NM at the heel are higher than the international standards recommend and are used solely at the skier's own risk!

7. FUNCTION CHECK

Check the function of the heel. Make sure that the boot does not catch on the heel during entry and exit. Check the brake function by pressing down the brake pedal (1) by hand. The brake arms (2) must open to the braking position when the brake pedal is released (Pict. 67).

Pict. 67

Check the elasticity and retention of the toe by pushing the boot inward and outward. The binding must recenter the boot easily and quickly from a 15 mm lateral displacement.

8. FINAL CHECK

- Is the proper mounting point selected?
- Functional brake test passed?
- Have all screws been fastened tightly?
- Is the forward pressure properly adjusted?
- Are the release values of toe and heel properly determined and set?
- Is the Instruction for use booklet ready to be handed over to the customer?

MOUNTING

DRILL TEMPLATE RACEPLATE 09

Drill Template Raceplate 09
Art.No.162902

1. COMPATIBILITY

Presently the drill template RACEPLATE 09 can be used for:

PLATES:
RACEPLATE RDX EP 14 WC, RACEPLATE JUNIOR EP 11.5 DUO

Drill template RACEPLATE 09 is for mounting of RACEPLATE EVO, RACEPLATE RDX and RACEPLATE Junior. It can be used for ski widths from 59 mm to 108 mm. For other skis use the template adapter set (Art. No. 162569). With this adapter set, you can mount skis from 45 mm to 132 mm. The following chart shows which bases and plates are suitable for the different ski-groups (G1-G4).

MODEL	G1	G2	G3	G4
RACE PLATE EVO 14	x	x	x	o
RACEPLATE RDX EP 14 WC	x	x	x	o
RACEPLATE JUNIOR EP 11.5 DUO	x	x	x	o

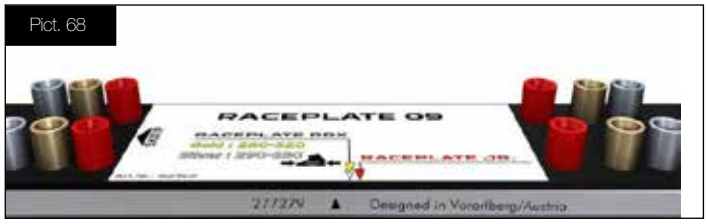
x ...suitable o ...not suitable

If bases and plates are mounted on other ski groups, the penetration depth and the torque moment of the screws have to be verified.

2. POSITIONING THE DRILL TEMPLATE

Open the clamping jaws (3) by rotating the clamping handles (1) and then place the template on the ski. Align the boot midsole indicator (2) for the appropriate model with the midsole mounting mark on the ski. Be sure the template is evenly seated against the ski's top surface. Release clamping handles.

Pict. 68



NOTE: Keep in mind that some ski manufacturers do not use the center of boot sole location method. Always follow the ski manufacturer's instructions.

3. DRILLING THE HOLES

If not otherwise specified by the ski manufacturer use a 4.1 Ø x 9.0 mm drill bit for RACEPLATE RDX, as it comes with 8 mm penetration screws. For RACEPLATE Junior, with 6 mm penetration screws, use a 4.1 Ø x 7.0 mm drill bit, if not otherwise recommended.

DRILL THROUGH THE APPROPRIATE BUSHINGS

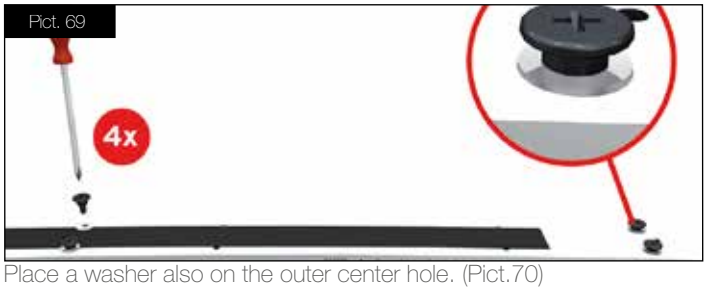
Version / Boot sole length	Color of bushings/ indicators
RACEPLATE EVO (261 - 372 mm)	silver
RACEPLATE RDX EP 14 WC (290-350 mm)	silver
RACEPLATE RDX EP 14 WC (260-320 mm)	gold
RACEPLATE JUNIOR EP 11.5 DUO (238-342 / 241-354 (SX))	red

After drilling place a drop of the glue into the holes. It lubricates the screws and seals the holes.

4. MOUNTING - RACEPLATE RDX
4.1. MOUNTING - PLATE

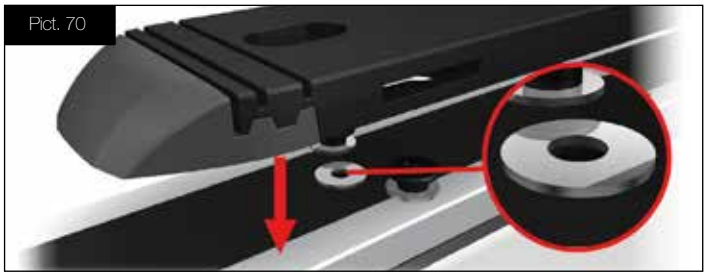
Place a washer on the outer outside holes and tighten the screws (4x).

Pict. 69



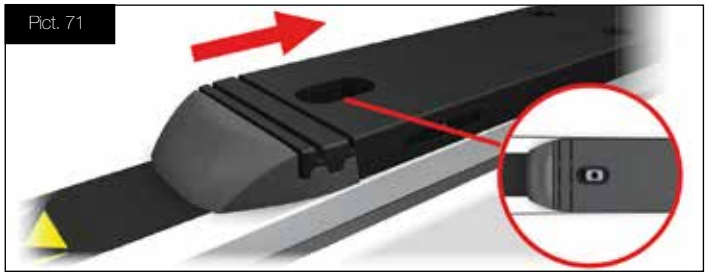
Place a washer also on the outer center hole. (Pict.70)

Pict. 70

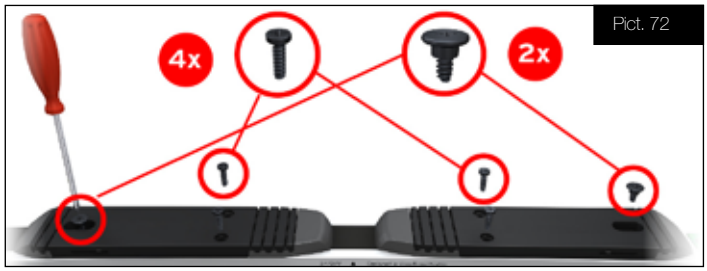


Then you can place the front and the rear part over the screws and push it in the appropriate position. Make sure that the washer stays in its position. To fix the plate, just tighten the screws.

Pict. 71



Pict. 72



4.2. MOUNTING - BINDING ON RACEPLATE RDX

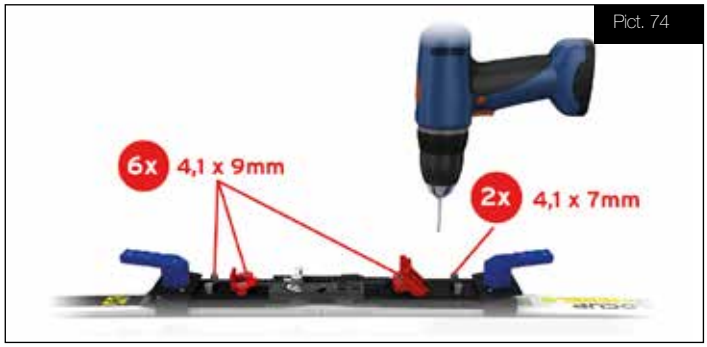
Before mounting the binding on RACEPLATES please con- sider the following mounting area. Also check and observe the specification of the ski manufacturer.

Pict. 73

Boot sole length	Mounting Position
290-350 mm	RACEPLATE RDX EP 14 WC - silver
260-320 mm	RACEPLATE RDX EP 14 WC - gold

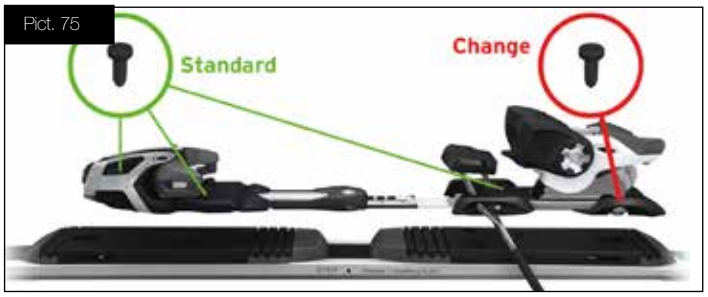
Use a 4.1 Ø x 9.0 mm drill bit for the toe holes and the front heel holes. For the rear heel holes use a 4.1 Ø x 7.0 mm drill bit.

Pict. 74



Change the screws of the standard rear heel according to the mounted binding!!! The screws come in a separate box with the RACEPLATE RDX!

Pict. 75



ER 20.0 FF EVO RD ER 16.0 FF EVO RD ER 17.0 FF EVO ER 14.0 FF DEMO	5.5x7.0
ER 14.0 FF EVO ER 11.0 FF EVO	5.5x18.5

Other than those two points, the mounting is the same as the method described in this manual in chapter template 92W!

5. MOUNTING - RACEPLATE JUNIOR

5.1. MOUNTING - PLATE

The compatible binding-plate combinations can be found in the compatibility chart (see page 62). Place the front part of the plate over the holes and fasten the screws. Then place the back part over the holes and fasten the screws.

Pict. 76

5.2. MOUNTING - BINDINGS ON RACEPLATE JUNIOR

For mounting junior bindings on PLATES you have to replace the pre-mounted screws by screws with 8 mm penetration depth. Only with these screws can we guarantee the right pullout strength.

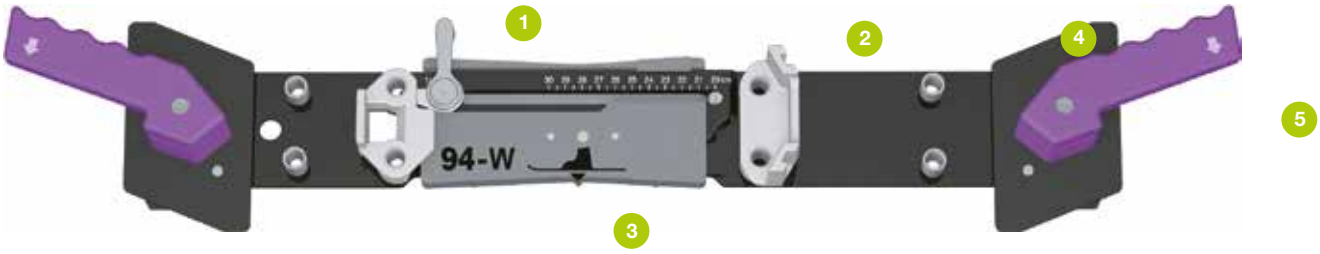
NOTE: Use only the pre-drilled holes for installation – do not drill holes into the plate to mount bindings of other manufacturers.

Determine the boot sole length with the Rental boot caliper and place the binding on the Plate corresponding to the appropriate printed length markings. Mount the binding in accordance to the procedures specified in this manual. (page 61)

Pict. 77

MOUNTING

DRILL TEMPLATE 94W



Drill Template 94W Art.No. 162761

1. COMPATIBILITY

Presently the drill template 94 W can be used for:

BINDINGS:
EL 4.5 AC

Drill template 94 W can be used for ski widths from 59 mm to 108 mm. For other skis use the template adapter set (Art. No. 162569).

The SX 4.5 AC binding comes with 6 mm penetration depth screws and can be used for skis-group G3 & G4. The standard brake, the SX KID BRAKE 74 [K], can be used for skis up to 74 mm, for wider skis use the SX KID BRAKE 84 [K] (Art. No. 162964), which is for skis from 74 mm to 84 mm.

NOTE: ELAN offers different types of brakes. Refer to the brake overview on page 31 for brake and binding compatibility.

The description of the brakes always includes a number and a color-letter code. This number stands for the maximum ski width in the brake area and not in the ski center! The color letter code defines the brake segment.

2. ADJUSTING THE DRILL TEMPLATE

Unlock the locking lever (1) by rotating it counter-clockwise. Place the template on the ski. Place the ski boot in the template. Push the template together until the stops are against the sole (2). Lock the lever (1) to prevent length change and take the boot out of the template.

3. POSITIONING OF THE DRILL TEMPLATE

Align the boot midsole indicator (3) with the midsole mounting mark on the ski. Be sure the template is evenly seated against the ski's top surface. Release clamping handles to attach the template to the ski. Check the boot midsole mark with template mark. If they are not the same use the boot midsole mark to align the template with the ski mounting mark.

NOTE: Some ski manufacturers do not use the center of boot sole location method. Always follow the ski manufacturer's instructions.

4. DRILLING THE HOLES

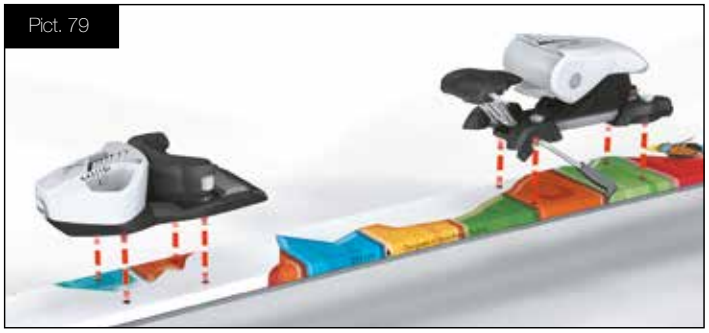
If not otherwise specified by the ski manufacturer, use a 4.1 Ø x 7.0 mm drill bit, which is the right bit for skis, group G3 & G4. Drill the holes using an appropriate drill. If required by the ski manufacturer, tap the holes. Place a drop of glue into the holes. It lubricates the screws and seals the ski (Pict. 78).

Pict. 78

5. MOUNTING

Place the toe unit over the holes and fasten the screws in an cross-pattern. Then do the same for the heel (Pict. 79).

Pict. 79



6. FORWARD PRESSURE

Place the boot in the binding and close it. The indicating pointer should rest within the marked area (Pict. 80), if not you have to adjust the forward pressure.

DON'T OPEN THE LENGTH ADJUSTMENT LOCK AS LONG AS A SKI BOOT IS FIXED IN THE BINDING.

Place the ski boot in the open binding and rest the boot heel on the brake pedal. Lift the length adjustment lock (1) with a screwdriver and slide the heel until the heel cup just touches the boot. Lock the length adjustment by pushing it down. Latch the boot in the binding and check forward pressure again. The toe pincers should not be pressed open and the indicating pointer should rest within the marked area (Pict. 80).

Pict. 80

7. ADJUSTMENT

Use the ELAN Rental Caliper to check and make sure that the boot meets international standards and is not damaged.

Pict. 81

AFS JUNIOR

The SX Junior Line is suitable for both adult (type A) and children (type C) boots: the innovative mechanical Anti Friction Slider (AFS) automatically adjusts to the boot sole height, compensating A/C standards as well as height differences due to icing up, dirt or boot wear. (Pict. 82).

Pict. 82

Pict. 83

If you want to increase the stability of your junior binding in combination with children (type C) boots, you can replace the standard AFS with a vertically blocked AFS (Art. No.162962), which is for children (type C) boots ONLY.

All you have to do is to separate the standard slider from the base plate. Afterwards you can simply click in the spare slider. (Pict. 83).

ADJUSTING THE RELEASE VALUES

The release values of the toe and heel should be determined by height and body weight (ISO/ASTM) method.

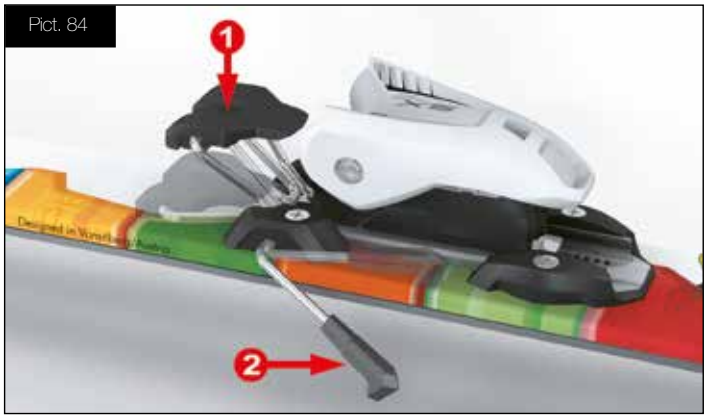
Set the binding accordingly with the adjustment screws at heel and toe unit. ELAN recommends adjusting these settings with a manual screwdriver. Do NOT use a screw shooter! We also recommend the use of a calibrated testing device and that you keep a written record of whether the system passes or fails (requirement in the US).

8. FUNCTION CHECK

ENTRY/EXIT: Check to make sure that the boot does not catch on the heel hold down lug.

BRAKE: Press the brake pedal (1) down by hand. The brake arms (2) must automatically return to the braking position when the treadle is released (Pict. 84).

Pict. 84



LATERAL ELASTICITY OF THE TOE

Press the boot laterally outward. The binding must re-center the boot easily and quickly from a 10 mm lateral displacement.

9. FINAL CHECK

- Has the proper mounting point been selected?
- Functional brake test passed?
- Have all screws been fastened tightly?
- Has the forward pressure been properly set?
- Are the release values of the toe and heel properly determined and set?
- Is the instruction for use booklet ready to be handed over to the consumer?

DRILL TEMPLATE SP 2003 W & SP 2003 FAT

Drill Template SP 2003 W Art.No. 162763
for ski widths from 59 to 108mm

Drill Template SP 2003 FAT Art.No. 162879
for ski widths from 104 to 154mm

1. COMPATIBILITY

Presently the drill template SP 2003 W and drill template SP 2003 FAT can be used for:

BINDINGS:
ESP 10.0 GW, ESP 7.5 AC, ESP 4.5 AC

All ELAN adult bindings come with 8 mm penetration screws and can be used with skis, of groups G1 & G2, except the SP 10 ABS FAT 115 model which is delivered with 6 mm penetration screws for G3 & G4 skis.

The junior binding ESP 7.5 AC is delivered with 6 mm penetration screws for skis, groups G3 & G4. If it is mounted on skis, groups G1 & G2, or on ELAN plates, replace them with longer screws. ESP 4.5 AC comes with 6 mm penetration screws and is only for skis of, groups G3 & G4.

Drill Template SP 2003 W can be used for ski widths from 59 mm to 108 mm, the drill template SP 2003 FAT for ski widths from 104 mm to 154 mm. For other skis use the template adapter set (Art. No. 162569). With this adapter set, you can mount skis from 45 mm to 132 mm with the standard SP 2003 W drill template, as well as skis from 90 mm to 178 mm with drill template SP 2003 FAT.

NOTE: ELAN offers different types of brakes. Refer to the brake overview on page 31 for brake and binding compatibility.

The description of the brakes always includes a number and a color-letter code. This number stands for the maximum ski width in the brake area and not in the ski center! The color letter code defines the brake segment.

2. POSITIONING THE DRILL TEMPLATE

Open the clamping jaws (3) by rotating the clamping handles (1) and then place the template on the ski. Align the boot midsole indicator (2) for the appropriate binding model with the midsole mounting mark on the ski. Be sure the template is evenly seated against the ski's top surface. Release the clamping handles (1) and attach the template firmly to the ski.

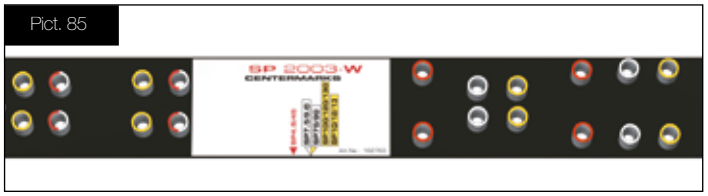
NOTE: Some ski manufactures do not use the center of boot sole location method. Always follow the ski manufacturer's instructions.

3. DRILLING THE HOLES

If not otherwise specified by the ski manufacturer, for all SYMPRO adult models use a 4.1 Ø x 9.0 mm drill bit for skis, groups G1 & G2. For ESP 7.5 AC and ESP 4.5 AC use a 4.1 Ø x 7.0 mm - drill bit for skis, groups G3 & G4.

Model	color of bushings/indicators
ESP 10 ABS	yellow
ESP 7.5 AC	white
ESP 4.5 AC	red

Pict. 85



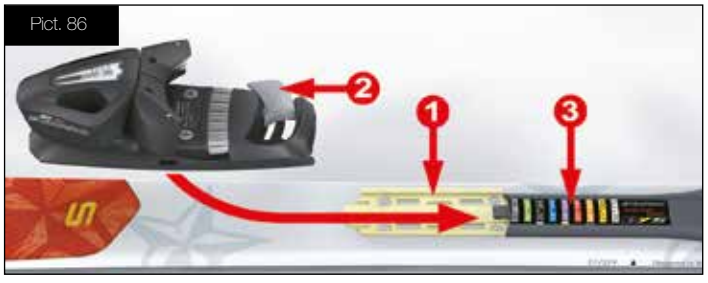
If required by the ski manufacturer, tap the hole. After drilling place a drop of glue into the holes. It lubricates the screws and seals the holes.

4. MOUNTING

MOUNTING THE TOE

Connect the plastic mid section (3) with the metal toe track (1). Place the assembled toe track (1) over the holes and tighten the screws. Open the one touch latch (2) and slide the toe piece on from the front. Adjust the toe piece to the desired SINGLE CODE position and close the latch (2). (Pict. 86)

Pict. 86



Make sure that the lever snaps in place completely ((it may be necessary to slide the toe forward and backwards slightly and to close the lever actively by hand).

MOUNTING THE HEEL
Place the heel unit with its brake, guide and track over the holes. Tighten the screws in a cross-pattern.

5. FORWARD PRESSURE CONTROL

Place a suitable reference boot in the binding using the SINGLE CODE for length adjustment and close it. Then check the indicator (see Pict. 87) located at the rear end of the heel piece. With boot inserted the pointer should rest in the middle of the marked area.

Pict. 87

If necessary, re-adjust the boot sole length, check the SINGLE CODE.
NOTE: Always remove the boot from the binding before adjusting.

6. ADJUSTMENT

FOR ALL MODELS
Find adjustment ranges and some handling hints in the "SYMRENT SYMPRO" section of the Technical Manual. Take at least one reference boot satisfying all standards and free of functional damages to perform test adjustments with the binding.

USING THE SINGLE CODE
Adjust the heel to the corresponding alpha-settings (SINGLE CODE) of the ski boot.

Pict. 88

IF A BOOT OF UNKNOWN SIZE IS USED PROCEED AS FOLLOWS:

Place the boot in the toe cup. Slide the heel piece forward until it just touches the boot. Close the binding and check the forward pressure.

ADJUSTING THE RELEASE VALUES

The release values of the toe and heel should be determined by height and body weight (ISO/ASTM) method. Set the binding accordingly with the adjustment screws at heel and toe unit. ELAN recommends adjusting these settings with a manual screwdriver. Do NOT use a screw shooter. We also recommend the use of a calibrated testing device and that you keep a written record of whether the system passes or fails (requirement in the US).
NOTE: Release/ Retention settings above a release moment of 105 NM at the toe and 452 NM at the heel are higher than the international standards recommend and are used solely at the skier's own risk!

7. FUNCTION CHECK

Before the newly mounted ski equipment is rented perform a complete functional check.

NOTE: In some countries rental equipment has to pass a Pre-Season Test (See the Rental section of this manual). The boot should not catch on the sole hold-down of the heel as it opens and closes.

BRAKE
Press the step-on plate (1) down by hand. The brake arms (2) must close and open automatically to the braking position when the step-on plate is released (Pict. 89).

Pict. 89

LATERAL ELASTICITY OF THE TOE
Press the boot laterally outward. The binding must re-center the boot easily and quickly from a 15mm lateral displace- ment. (Model ESP 7.5 AC and ESP 4.5 AC – 10 mm).

8. FINAL CHECK

- Has the proper mounting point been selected?
- Have all screws been fastened tightly?
- Has the forward pressure setting been controlled?
- Has at least one full adjustment been made using a representative reference boot including Release- / Retention setting and momentum test?
- Has the functional check been passed successfully?
- Functional brake test passed?

MOUNTING

DRILL TEMPLATE SR 2003 W

Drill Template SR 2003 W
Art.No. 162762

1. COMPATIBILITY

Presently the drill template SR 2003 W can be used for:

BINDINGS:
ESR 10.0

ESR 10.0 comes with 8 mm penetration screws and can be used with skis, groups G1 & G2.

Drill template SR 2003 W can be used for ski widths from 59 to 108 mm. For other skis use the template adapter set (Art. No. 162569). With this adapter set ski widths from 45 to 132 mm can be mounted.

NOTE: ELAN offers different types of brakes. Refer to the brake overview on page 31 for brake and binding compatibility. The description of the brakes always includes a number and a color-letter code. This number stands for the maximum ski width in the brake area and not in the ski center! The color letter code defines the brake segment.

2. POSITIONING THE DRILL TEMPLATE

Open the clamping jaws (2) by rotating the clamping handles (1) and then place template on the ski. Align the boot mid- sole indicator (3) for the appropriate binding model with the midsole mounting mark on the ski. Be sure the template is evenly seated against the ski's top surface. Release clamping handles (1) and attach the template firmly to the ski.

NOTE: Some ski manufactures do not use the center of boot sole location method. Always follow the ski manufacturer's instructions.

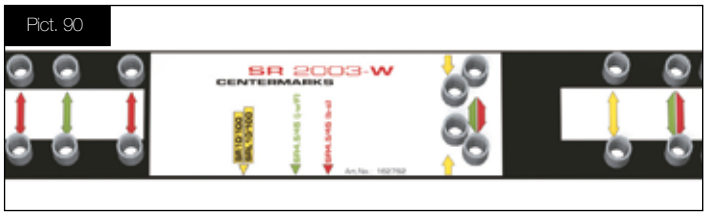
3. DRILLING THE HOLES

If not otherwise specified by the ski manufacturer, for all SYMRENT adult models use a 4.1 Ø x 9.0 mm drill bit for skis, groups G1 & G2.

DRILL THROUGH THE APPROPRIATE BUSHINGS

Model	color of bushings/indicators
ESR 10	yellow

Pict. 90



If required by the ski manufacturer, tap the hole. After drilling place a drop of glue into the holes. It lubricates the screws and seals the holes.

4. MOUNTING

MOUNTING THE TOE

Place toe piece on the prepared holes and drive the screws.

MOUNTING THE HEEL

Place the heel unit with its brake, guide and track over the holes. Tighten the screws in a cross pattern.

Pict. 91

5. FORWARD PRESSURE CONTROL

Place a suitable reference boot in the binding using the SINGLE CODE for length adjustment and latch it. Then check the indicator (see Pict. 92) located at the rear end of the heel piece. With boot inserted the pointer should rest in the middle of the marked area.

Pict. 92

NOTE: If the forward pressure is not correct, readjust the boot sole length and check the SINGLE CODE. Please make sure that no boot is placed in the binding during adjusting!

6. ADJUSTMENT

FOR ALL MODELS

Find adjustment ranges and some handling hints in the SYMPRO/ SYMRENT section of the Technical Manual. Take at least one reference boot satisfying all standards and free of functional damages to perform test adjustments with the binding.

USING THE SINGLE CODE

Adjust the heel to the corresponding alpha-setting (SINGLE CODE) of the ski boot (Pict. 93).

Pict. 93

IF A BOOT OF UNKNOWN SIZE IS USED PROCEED AS FOLLOWS:

Place the boot in the toe cup. Slide the heel piece forward until it just touches the boot. Close the binding and check the forward pressure.

ADJUSTING THE RELEASE VALUES

The release values of the toe and heel should be determined by height and body weight (ISO/ASTM) method. Set the binding accordingly with the adjustment screws at heel and toe unit. ELAN recommends adjusting these settings with a manual screwdriver. Do NOT use a screw shooter. We also recommend the use of a calibrated testing device and that you keep a written record of whether the system passes or fails (requirement in the US).

NOTE: Release/ Retention settings above a release moment of 105 NM at the toe and 452 NM at the heel are higher than the international standards recommend and are used solely at the skier's own risk!

7. FUNCTION CHECK

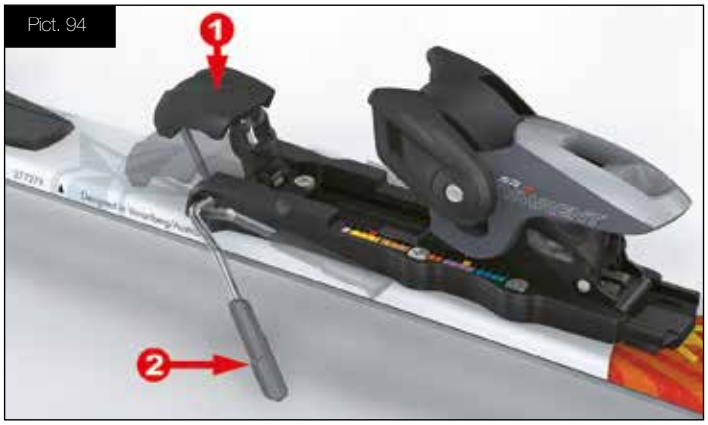
Before newly mounted ski equipment is rented perform a complete functional check.

NOTE: In some countries rental equipment has to pass a Pre-Season Test (See the Rental section this manual).
The boot should not catch on the sole hold-down of the heel as it opens and closes.

BRAKE

Press the step- on plate (1) down by hand. The brake arms
(2) must close and open automatically to the braking position when the step-on plate is released (Pict. 94).

Pict. 94



LATERAL ELASTICITY OF THE TOE

Press the boot laterally outward. The binding must recenter the boot easily and quickly from a 15 mm lateral displacement.

8. FINAL CHECK

- Has the proper mounting point been selected?
- Have all screws been fastened tightly?
- Has the forward pressure setting been controlled?
- Has at least one full adjustment been made using a representative reference boot including Release- / Retention setting and momentum test?
- Has the functional check been passed successfully?
- Functional brake test passed?

MOUNTING
FUSION

1. COMPATIBILITY

Presently the Fusion 4 system plates can be used on the following bindings:

BINDINGS:
ELX 14.0 GW Fusion Brake 85, ELX 12.0 GW Fusion Brake 85, ELX 12.0 GW Fusion Brake 95, ELX 11.0 GW Fusion Brake 85, EL 11.0 GW Fusion Brake 85

Fusion 4 system replaced the old Fusion 2 system in season 12/13. Systems are not compatible! All Fusion 4 plates are pre-mounted on skis.

2. FIRST INSTALLATION

Open the toe-lever and slide the toe on the rail from the front.

Pict. 01

Slide the toe towards tail. At certain point the toe will stop, then release the laver and push it into the end position.

Pict. 02

Now hook the brake into the heel housing.

Pict. 03

Open the heel-lever (forward pressure indicator) and slide the heel on the rail from the tail.

Pict. 04

Slide the heel towards tip. At certain point the binding will stop.

Pict. 05

Then release the laver and push it into the end position.

Pict. 06

3. ADJUSTING BOOT SOLE LENGTH

Make sure that the boot is satisfying the international standards and has no functional damage. Take the binding parts out of the box and follow the steps on the instruction leaflet. Determine the boot sole length with the rental caliper (Art. No. 162617).

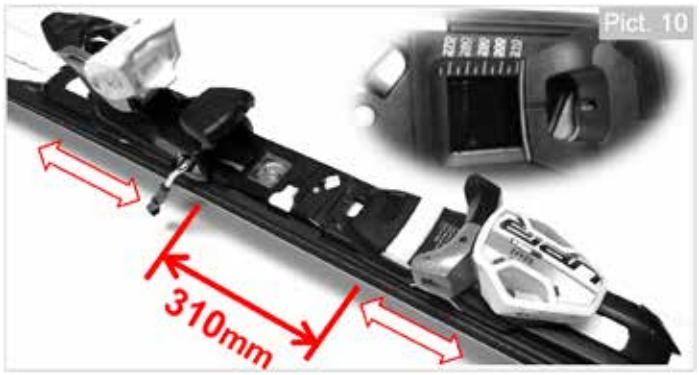
Pict. 07

Once the bindings are mounted onto a ski it is very easy to adjust it to

desiderate boot sole length (Pict.9). First open the safety lever (1) of the fusion central mechanism. Keeping the safety lever open, now open (pull up) the (second) locking lever (2) and release them both. Both levers must stay in open position so that bindings are released!

DO NOT USE TOOLS like a screwdriver to perform this operation!

Slide bindings to the desiderate length mark located at the toe.



Lock the central locking system by pushing down the lock lever (2) back to close position.

Check once again if levers (1) and (2) are in locked position!

Finally, check the forward pressure, by placing a boot into the binding. If you have followed all steps correctly, the indicator should rest in the marked area.

If you have too much or not enough forward pressure, check the settings and if necessary, adjust slightly. Then close the levers and check the forward pressure again. Now it should be okay.

4. ADJUSTMENT OF THE RELEASE VALUES

The release values at toe and heel should be determined by height and body weight (ISO/ASTM) method. Set the binding accordingly with the adjustment screws. We recommend the use of a calibrated testing device and that you keep a written record of whether the system passes or fails (requirement in the US).

NOTE: Release/ Retention settings above a release moment of 100Nm at the toe and 425Nm at the heel are higher than the international standards recommend and are used solely at the skier's own risk!

***HEIGHT ADJUSTMENT - MBS BINDINGS: page 63.**

5. FUNCTION CHECK

Check the function of the heel. Make sure that the boot does not catch on the heel during entry and exit. Check the brake function by pressing down the brake pedal (1) by hand. The brake arms (2) must open to the braking position when the brake pedal is released (see Pict 15)

Check the elasticity and retention of the toe by pushing the boot inward and outward. The binding must re-center the boot easily and quickly from a 15mm lateral displacement.

6. FINAL CHECK

- Is the proper mounting point selected?
- Functional brake test passed?
- Is the forward pressure properly adjusted?
- Are the release values of toe and the heel properly determined and set?
- Is the Instruction for use booklet ready to be handed to the customer?

MOUNTING
SHIFT

1. COMPATIBILITY

ELAN offers three types of SHIFT plates, the QuickShift (QS), LightShift (LS) and PowerShift (PS) plate:

Plate	Size	Boot Sole Length (mm)
QuickShift	S: M: L:	183-283 215-315 255-355
LightShift	L: XL:	255-355 271-371
PowerShift	L: XL:	255-355 271-371

All ELAN's SHIFT plates are pre-mounted on skis! Presently the SHIFT plates can be used for next bindings:

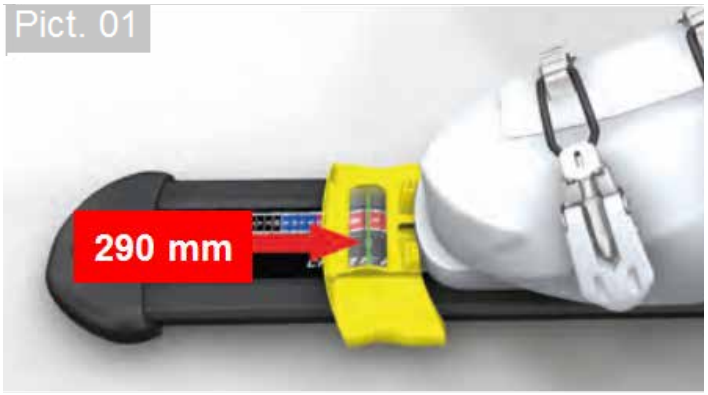
BINDINGS:
ELX 11.0 GW SHIFT Brake 85, ELS 11.0 GW SHIFT Brake 85, ELS 11.0 GW SHIFT Brake 90, EL 10.0 GW SHIFT Brake 85, EL 10.0 GW SHIFT Brake 90, EL 9.0 GW SHIFT Brake 85, ELW 11.0 GW SHIFT Brake 85, ELW 10.0 GW SHIFT Brake 85, ELW 9.0 GW SHIFT Brake 85, EL 7.5 AC SHIFT Brake 78, EL 7.5 AC SHIFT Brake 90, EL 4.5 AC SHIFT Brake 74, EL 4.5 AC SHIFT Brake 84

2. MOUNTING - BINDINGS

Mounting and adjusting the SHIFT bindings is extremely simple and can be done without any additional tool.

Make sure that the boot meets the international standards and is free of any functional damage. Take the binding parts out of the box and follow the steps on the instruction leaflet. Determine the boot sole length with the rental boot indicator (Pict.01), (Art. no. 162 617).

Pict. 01



First you have to open the toe-lever and slide the toe on the rail from the front. Lock at the appropriate boot sole length and close the lever.

Pict. 02

Now hook the brake into the heel housing (Pict.03).

Pict. 03

Then you can open the lever and slide the heel on the rail from the back! Simply lock it at the appropriate boot sole marking by closing the lever - and you are ready to go! (Pict.04).

Pict. 04

Finally, check the forward pressure, by placing a boot into the binding. If you have followed all steps correctly, the indicator should rest in the marked area (Pict.05).

Pict. 05

If you have too much or not enough forward pressure, check the settings at first. If necessary, adjust slightly at the heel and the toe (Pict.06).

Then check the forward pressure again.

3. AFS JUNIOR ON DIN 9.0 AC DIN 7.5 AC & DIN 4.5 AC MODELS

The SX Lite and Junior/Kid lines are suitable for both adult (type A) and children (type C) boots: the innovative mechanical Anti Friction Slider (AFS) automatically adjusts to the boot sole height, compensating A/C standards as well as height differences due to icing up, dirt or boot wear. (Pict.07)

If you want to increase the stability of your junior binding in combination with children (type C) boots, you can replace the standard AFS with a vertically blocked AFS (Art. No.162962), which is for children (type C) boots ONLY.

All you have to do is to separate the standard slider from the base plate. Afterwards you can simply click in the spare slider (Pict.08).

4. ADJUSTMENT OF THE RELEASE VALUES

The release values at toe and heel should be determined by the height and body weight (ISO/ ASTM) method. Set the binding accordingly with the adjustment screws. We recommend the use of a calibrated testing device and that you keep a written record of whether the system passes or fails (requirement in the US).

NOTE: Release/ Retention settings above a release moment of 100Nm at the toe and 425Nm at the heel are higher than the international standards recommend and are used solely at the skier's own risk!

5. FUNCTION CHECK

Check the function of the heel. Make sure that the boot does not catch on the heel during entry and exit. Check the brake function by pressing down the brake pedal (1) by hand. The brake arms (2) must open to the braking position when the brake pedal is released (see Pict.09).

Check the elasticity and retention of the toe by pushing the boot inward and outward. The binding must re-center the boot easily and quickly from a 15mm lateral displacement (EL 7.5 AC Shift, EL 4.5 AC Shift - 10mm).

6. FINAL CHECK

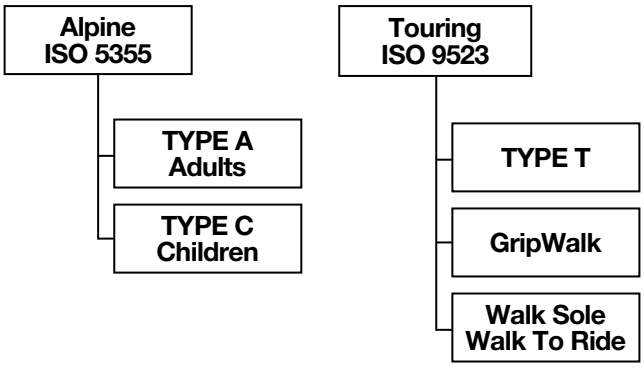
- Is the proper mounting point selected?
- Functional brake test passed?
- Have all locks been closed correctly?
- Is the forward pressure properly adjusted?
- Are the release values of the toe and the heel properly determined and set?
- Is the Instruction for use booklet ready to be handed over to the customer?

MOUNTING

BOOT SOLE TYPES - ISO STANDARDS

1. BOOT STANDARDS

Actually there are two different boot sole standards on the market. The ISO 5355 (corresponding to binding standard ISO 9642)defines all alpine boots for adults and children and the ISO 9523 (corresponding to binding standard ISO 13992) defines a wide range of touring ski boots, including Grip Walk, Walk Sole and Walk To Ride.



New sub categories (GripWalk, Walk Sole and Walk To Ride) try to combine the advantages of both standards:

- To offer more grip and better walkability compared to ALPINE boots. A profiled sole made of softer material offers a superior walking grip and is less slippery than a standard ski boot sole. A rockered sole offers a more comfortable natural roll motion.
- To also offer better skiability and increased safety compared to TOURING boots (hard contact area, stiffer material, alpine boot design) and the same safe release function and power transmission as an alpine boot.
- The boots are designed not according to ISO 5355 (ALPINE), but to ISO 9523 (TOURING) specifications, which means they will work only on bindings with the corresponding compatibility.

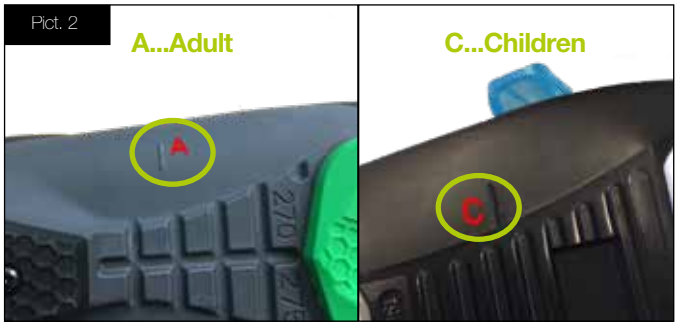
2. BOOT IDENTIFICATION

In general, all boots should be marked with the corresponding standard. In most cases you will find the indication on the sole pads of the boot.

ALPINE BOOTS ISO 5355

Pict. 1

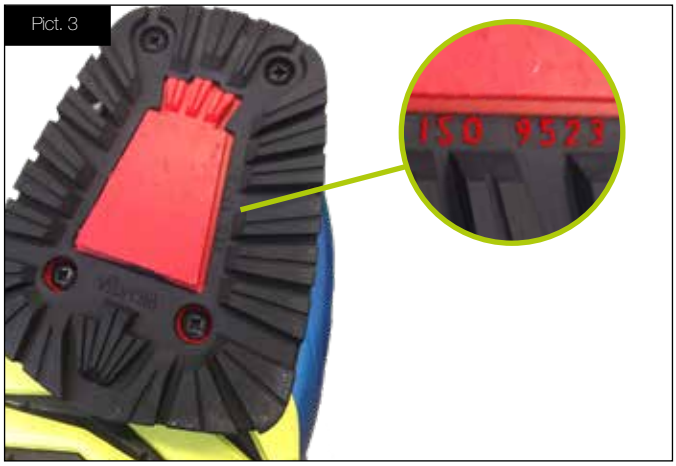
Pict. 2



TOURING BOOTS ISO 9523

In case there is no other marking, in addition to ISO 9523, the boot is a regular touring boot, neither belonging to GripWalk nor Walk Sole/Walk To Ride. In this case the boot will only work in bindings with AT compatibility.

Pict. 3



TOURING BOOTS ISO 9523 - GripWalk

To help identify a GripWalk boot the GripWalk icon and ISO marking are incorporated in the sole. The boot is also marked with a sticker placed in the toe area. Boots will also show a GripWalk print on the side of the heel pad. The Sticker comes from the factory on boots with pre-mounted GripWalk soles or it needs to be placed in the toe area if the pads are retrofitted.

Pict. 4

Pict. 5

Pict. 6

TOURING BOOTS ISO 9523 - Walk Sole

The replaceable Walk soles are color-coded in orange. The ISO 9523 marking is visible on the toe pad (Pict.5). You will find the WALK - logo on the side of the heel pad (Pict.6).

TOURING BOOTS ISO 9523 – Walk To Ride (WTR) boots

To identify Walk To Ride boots please check the boot for the Walk To Ride logo and the ISO identification (ISO 9523). This information is generally shown, directly on the sole of the toe and heel pad.

3. BOOT-BINDING COMPATIBILITY

In case of uncertainty, the dealer should check the instructions of use of the binding. It lists all compatible boot types:

E.g. for an Attack² GW	E.g. for an Attack² AT	E.g. for an MBS model
This binding model can be used with ski boots that meet following current industry standards - ALPINE TYPE A (ÖNORM/DIN/ISO 5355) and GRIPWALK (ÖNORM/DIN/ISO 9523).	This binding model can be used with ski boots that meet following current industry standards - ALPINE TYPE A (ÖNORM/DIN/ISO 5355) and TOURING TYPE T (ÖNORM/DIN/ISO 9523) including GripWalk,Walk Sole and Walk To Ride.	This binding model can be used with ski boots that meet following current industry standards - ALPINE TYPE A (ÖNORM/DIN/ISO 5355), GRIPWALK and WALK SOLE/WALK TO RIDE (ÖNORM/DIN/ISO 9523).

BOOT - BINDING - COMPATIBILITY - CHART

The following chart shows the boot–binding compatibility of the current ELAN binding line:

		ISO 5355		TOURING - ISO 9523		
		Alpine Adult (TYPE A)	Alpine Children (TYPE C)	GripWalk	Walk Sole Walk to Ride	no further specification
Binding without any specification*		✓	X	X	X	X
Binding with “AC“		✓	✓	X	X	X
Binding with “GW“	GRIP WALK	✓	X	✓	X	X
Binding with “MBS“	MBS	✓	X	✓	✓	X
Binding with “AT“	AT	✓	X	✓	✓	✓

*specification can be found in the product name and partly also on the binding

BOOT-HANDLING AND TESTING

VISUAL INSPECTION OF SKI BOOTS

In assembling a system for the skier, it is the responsibility of the shop to inspect and evaluate each equipment component. This inspection checklist should be followed before any mounting or adjusting is performed.

Ideally, they should be posted and used on the sales floor while the customer is still in the shop so that any deficiencies can be explained on the spot.

In retail, boots must pass all four points of this inspection before being accepted for use. In rental, this inspection is the first step in the "pre-season boot test procedure".

1. CHECK TYPE, SIZE AND OVERALL CONDITIONS

- Is the performance level appropriate for the skier?
- Is the size correct (SINGLE CODE, boot sole length)?
- Is all hardware intact and in working order?
- Is the boot free of excessive or asymmetric wear?
- Is the boot free of dirt or sole warp?

2. CHECK MATERIAL

- Binding contact surfaces require a high quality hard, low-friction material. Check both lower shell and any separately attached inserts.
- If you can easily scratch the surface of the sole with your fingernail, that's an indication of extremely soft material that can degrade system performance.

3. CHECK CONDITION OF BINDING CONTACT SURFACES, TOE AND HEEL

- Any scratches or other roughness should not be deeper than 1 mm.
- Check for any rocks, gum, or other foreign matter stuck to the sole.

4. VERIFY BOOT SOLE DIMENSIONS

- Ski boots must meet international standard specifications.
- Use the Boot Rental Indicator to determine whether wear is excessive. The most critical dimension for ELAN bindings is the front surface and height of the boot toe. Any boots worn past the indicated amounts should be repaired or not used with ELAN bindings.

Pict. 1

Pict. 2

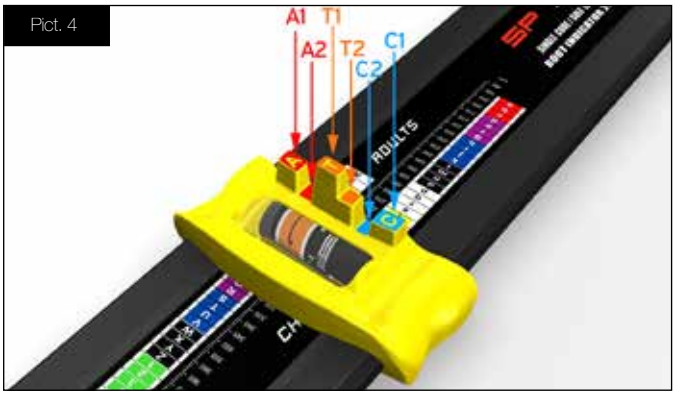
Pict. 3

THE BOOT INDICATOR Art. No. 162617

This rental boot device is a multifunction-tool:

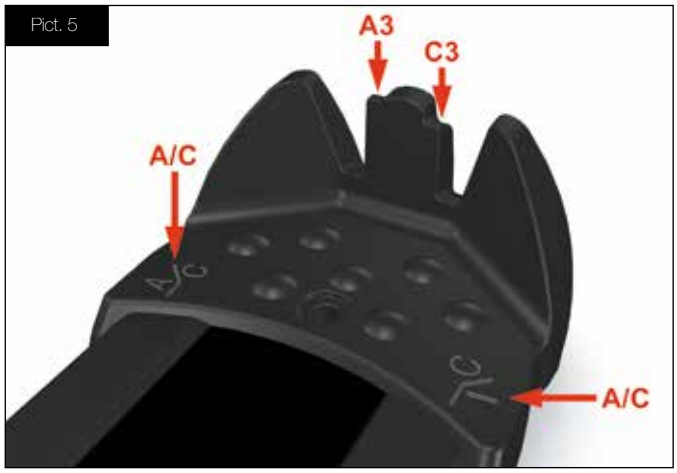
1. Sole length: Put the boot in the device and slide the toe stop up to the boot toe. Read sole length in the window, used for ELAN rental bindings: the SINGLE CODE. Boot sole wear: The standardized interfaces (contact boot sole with sole lugs) are important in the functioning of ELAN bindings.
3. Boot toe bottom: Excessive wear is indicated if the lower edge of the front surface is at or above the bottom step on the appropriate child (C 2), adult (A 2) or touring (T 2) post (see Pict. 143).
4. Boot toe ledge height: With the toe stop against the boot toe, the level of the toe ledge should be at or above the top of the appropriate post, "Child" (C 1), "Adult" (A1) or "Touring" (T 1) (see Pict. 143). Replace toe pads if worn.

Pict. 4



5. Heel height and wear: Check this boot standard with the same procedure used for the toe. The heel posts (A 3 + C 3) are located at the rear of the device (see Pict. 5).
6. The marks "A/C" help to select a "Child" boot from an "Adult" by indicating the standardized sole width.

Pict. 5



NOTE:
Any boot which passes points 3, 4 and 5, as well as conforming to the Visual Inspection Checklist, may be accepted for use with ELAN bindings.

Boots which fail any point should be repaired or replaced.
These checks apply only to boots used with ELAN bindings. Consult other binding manufacturers for their used boot specifications.

CLEAN VS. LUBRICATED SKI BOOT TEST

This test is designed to determine the influence of a given boot on the release characteristic of a binding. It should be performed on boots not meeting all the points of the boot visual inspection criteria, or if measured release values fall outside the system "inspection" tolerance. It is seen as the "last chance" for a boot to qualify before getting eliminated from inventory.

1. Clean the boot(s) to be tested with soap and water. Allow to dry.
2. Select an appropriate "reference" binding that has displayed release values within the inspection tolerance on the Adjustment Chart. Clean the binding's boot contact surfaces with soap and water and allow to dry.
3. Test the binding and boot in Twist and Forward Lean at a mid-scale indicator value (Only one direction of twist is required).
4. In a further test run lubricate all boot/binding contact areas with soapy water. Retest in Twist and Forward Lean.
5. Results of each lubricated test should be within 20% of the corresponding results when tested clean.

Any boot which fails this test should not be used with An ELAN binding.

MAINTENANCE & SERVICE

1. VISUAL INSPECTION OF BINDINGS

In assembling a system for the skier, it is the responsibility of the shop to inspect and evaluate each equipment component. This inspection checklist should be followed before any mounting or adjusting is performed. Ideally, they should be posted and used on the sales floor while the customer is still in the shop so that any deficiencies can be explained on the spot.

2. CHECK SUITABILITY

- Is the binding model appropriate for the skier's ability?
- The binding must be compatible with the customer's boot/ski.
- The skier's release/retention setting should fall within the binding's adjustment range. Additionally, we recommend that the skier's setting not be closer than one number from the minimum or maximum settings on the binding in order to allow for future readjustment.
- Are the mounting screw lengths appropriate for the ski being used?

3. CHECK THE CONDITION OF BINDING

- Are all parts present and in working order?
- Is the AFD surface smooth and secure? If not, it should be replaced.
- Are all mounting screws present or tight?
- Does the binding show signs of contamination?
- Has proper periodic lubrication been performed?

Dried out or corroded bindings can function improperly.

4. RETAIL TESTING

Completion and documentation of the following Retail Test Procedures is recommended for U.S.: required under the terms of the ELAN Dealer Indemnity Program.

These tests should be conducted any time work is performed on a ski/boot/binding system that may affect its release values. The procedure applies to all ELAN alpine bindings, new as well as used.

1. Follow ELAN procedures for inspection, mounting, adjustment, and maintenance as appropriate.
2. Confirm that toe and heel indicator values match those specified on the actual ELAN Adjustment Chart.
3. Using a calibrated testing device, according to its instructions for use, "exercise" the binding by releasing it at least once in each direction (clock-wise and counter clockwise at the toe, vertically at the heel). Then measure Twist and Forward Lean Torque Values. The middle quantitative value of 3 releases in each direction should be used as the test result.
4. Compare Twist and Forward Lean test results with the System Inspection Ranges on the actual ELAN Adjustment Chart.
5. If any test results fall outside the System Inspection Range, consult ELAN Troubleshooting Procedures which follow this section.
6. With testing complete, the ELAN Certified Mechanic must complete and sign the workshop ticket. Be sure the Final Indicator Settings are correctly shown there.

The workshop ticket should simply reflect that the system has "passed all tests" or that "all manufacturer's procedures have been completed".

5. REPLACING THE BRAKE

If the brake feels too hard or blocks during the hand test, if the brake arms are damaged, if the pedal is worn out or if a wider brake is necessary then the brake should be replaced immediately.

ELAN offers different brakes for almost every binding. Refer to the brake overview on page 31 for brake and binding compatibility. To change the brake, all you have to do is to unscrew the old brake and replace it with

the proper brake previously selected for the binding. In order to fix the brake, tighten the screws. On rail-bindings, the brake is hooked into the heel housing and not fixed with screws. Slide the heel off from the rails and replace the brake (Pict. 6).

Pict. 6

6. REPLACING THE GLIDE INSERTS

POWERRAIL BINDINGS

To provide unaffected long-term performance of the new POWERRAIL binding models, the toe and heel guides can be exchanged or retrofitted. These features ensure that steady function is guaranteed, even after massive use in rental.

Art.No. – 162950 Play Compensator PR TOE ABS
Art.No. – 162955 Play Compensator PR TOE AFS
Art.No. – 162951 Play compensator PR HEEL

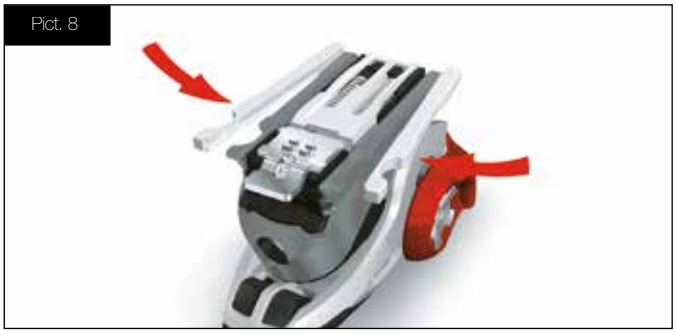
To change the inserts just slide toe and heel off the rails and replace them with new ones (Pict. 7). Lubricate the new inserts with grease, clean the track, and slide toe and heel back in its original position on the rails.

Pict. 7

HEEL INSERTS FOR RACE PRO HEEL

Open the heel-locking lever and pull off the heel backwards. Remove the inserts and mount the new ones - Art. No. 162803 (Pict. 8).

Pict. 8



Lubricate the new inserts with grease, clean the heel track, and slide the heel back into the track. Lock the locking lever into the same position it was before.

7. LONG & SHORT SCREWS

Junior Bindings (DIN 7 or 7.5) are delivered with screws for skis, groups G3 & G4 (penetration depth 6 mm). If they are mounted on skis, groups G1 & G2 then the screws have to be replaced with longer screws. (penetration depth 8 mm).

8. TAPPING

ELAN recommends tapping the drilled binding holes of any ski before mounting. Of course, there is a never ending discussion among the mechanics if this is really necessary. But the pros are convincing:

- smooth and easy mounting
- reduced risk of stripping a screw
- same momentum adjustment of the screwdriver regardless of the ski material
- increased mounting quality/precision
- fewer pull outs.

9. TEMPLATE ”ADAPTER SET“

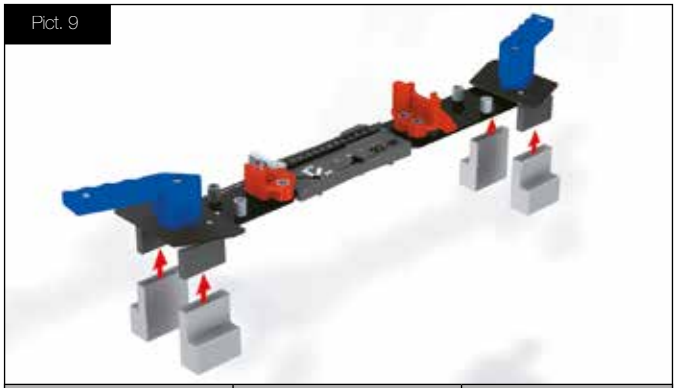
Compatible to all Templates. By using the template Adapter Set (Art. No. 162569) the mounting range of your template can be adapted depending on how you position the adapters on the drill template.

WARNING: Avoid dropping of the template. The clamping jaws could be damaged.

YOU HAVE 3 POSSIBLE OPTIONS

A. For raised mounting position:

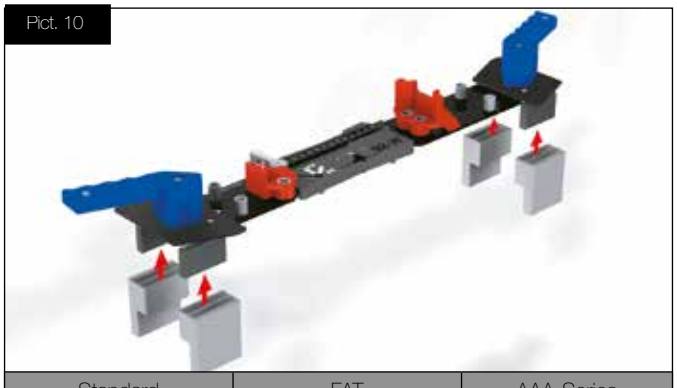
Pict. 9



Standard drill tamplate 59-108 mm	FAT drill tamplate 104-145 mm	AAA-Series drill tamplate 75-125 mm
50 - 99 mm	95 - 145 mm	66 - 116 mm

B. For wider mounting position:

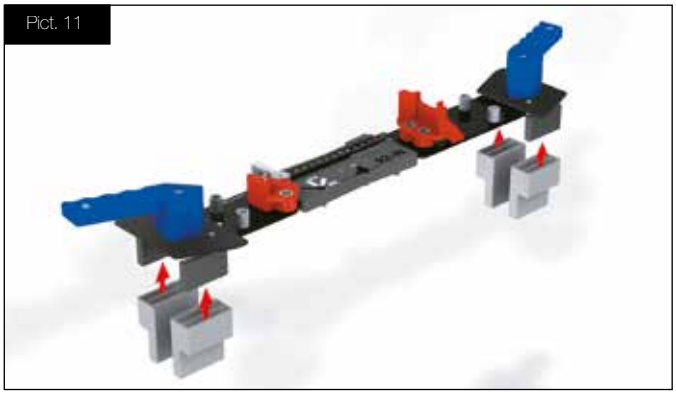
Pict. 10



Standard drill tamplate 59-108 mm	FAT drill tamplate 104-145 mm	AAA-Series drill tamplate 75-125 mm
83 - 132 mm	128 - 178 mm	99 - 149 mm

C**. For narrower mounting position:**

Pict. 11



Standard drill tamplate 59-108 mm	FAT drill tamplate 104-145 mm	AAA-Series drill tamplate 75-125 mm
45 - 94 mm	90 - 140 mm	61 - 111 mm

10. RACING (X) - BINDINGS

Certain binding models are produced by each year for the exclusive use of qualified competitors under the supervision of ELAN Technical Specialists.

Racing bindings offer release/retention settings outside of those on the ELAN Release/Retention Adjustment Table, which is based upon ISO/ASTM Safety Standards. These bindings can be serviced under the Dealer Indemnity Program if proper procedures are followed.

We recommend you decline to service them and that you warn against their use unless you have training or experience as a race technician and your customer is a high-level competitor who clearly states a need for these bindings. The customer is to be warned that using these bindings significantly increases the risk of injury due to non-release, and that settings exceeding the recommended range are made at the skier's own risk. If you do service racing bindings, you must follow the same procedures described above for making specific comments on the standard workshop form in addition to completing the form on this page to be signed be the skier.

11. CLEANING AND LUBRICATING

Ski bindings need regular maintenance. Proper function is no longer assured if this procedure is not followed periodically.

- Please use only recommended lubrication: 160052 - grease or 162779 - service–grease-spray. Both have the same content, but the grease tube is for more precise lubrication and the spray is suited for spots which are hard to reach with the tube.
- Clean the surfaces with a dry rag or warm water and mild soap.
- Avoid any contact with aggressive solvents or degreasers!
- Don't use cleansers!
- High pressure cleaning is not recommended. It might have the negative side effect of washing away the lubricating films.

11.1. LUBRICATING THE TOE PIECE

ALL SYMPRO/SP TOES

- In case of friction in the track system: Mark the toe position, open the SP hand lever and slide the toe piece off.
- Dry clean the track and the toe guide base gently using a plastic brush.
- Then lubricate the locking mechanism at both sides of the toe guide base.
- Lubricate also both sides of the track guide over the entire length.

Pict. 12

11.2. LUBRICATING THE HEEL

ALL RENTAL BINDINGS

- Mark heel position, open the hand lever and slide the heel off backwards. At the SR 10 the guide lock has to be opened with a screwdriver (Pict. 13) to get the binding off.

Pict. 13

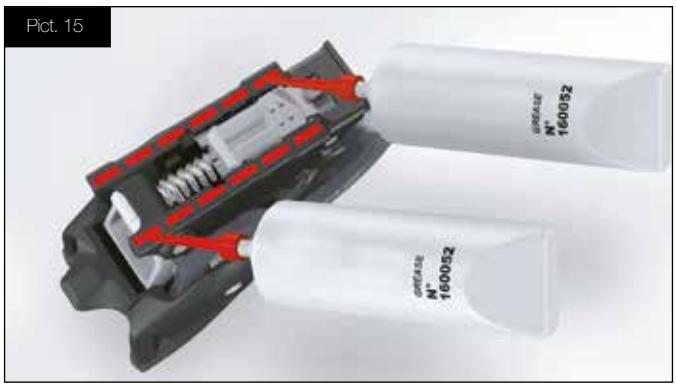
LUBRICATE

- the edge of the release cam under the heel lug

Pict. 14

- both sides of the heel track (inside) over the entire length
- the bearings of the opened hand lever on both sides

Pict. 15



- the guiding channel of the release setting adjustment screw.

After finishing the heel lubrication slide on the heel and lock it in its original position.

11.3. ESP 4.5 AC

LUBRICATE

- the contact areas between housing and the release cam on the frontside and the backside as shown in Pict. 16 and 17.
- both sides of the heel track (inside) over the entire length.
- the guiding channel of the release setting adjustment screw (Pict. 17)

Pict. 16

Pict. 17

After finishing the heel lubrication slide on the heel and lock it in its original position.

11.4. NOT TO BE LUBRICATED

The locking element and the corresponding holes in the heel track should be cleaned but not lubricated. This should prevent dirt accumulation in this area, which could interfere with the ease of handling.

12. TEST YOUR DRILL TEMPLATE

A worn or damaged drill template could create a lot of trouble. Please check your templates periodically:

1. Position the fully extended drill template on a discarded ski.
2. Turn the clamping lever to open the clamping jaws of the mounting template.
3. Position the template properly on the ski so that the boot center marking is aligned with the mounting point described on the ski.
4. Let go of the clamping lever. The template clamps automatically.
5. Drill all the holes.
6. Remove the mounting template and clean the ski.
7. Measure the holes with a slide gauge.
8. The distance of the screw holes to the edge of the ski must be equal for each pair of related holes. The deviation must not be more than 1 mm.
9. Repeat the test, if greater deviations occur.
10. The mounting template must be discarded if greater deviations occur again!

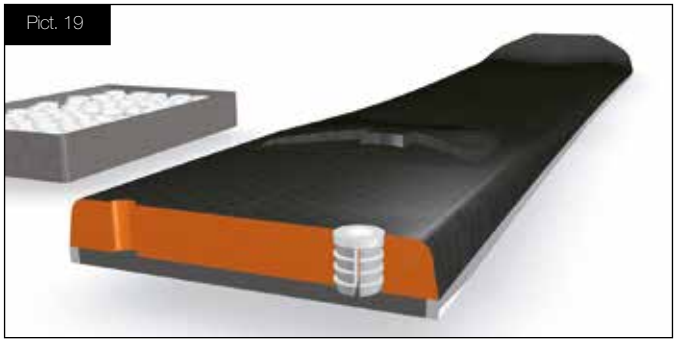
13. REPAIR OF DAMAGED MOUNTING HOLES OR BROKEN SCREWS

For repairing damaged holes, we suggest our special “Repair Set” – Art. No. 162127. It consists of a hollow drill bit and plastic inserts (Pict. 18).

Pict. 18

You can extract broken screws too. Remove the binding from the ski. Drill with the hollow drill through the bushing of the appropriate drill template and drive in the plastic insert. Mount the binding again.

Pict. 19



14. SEALING OLD MOUNTING HOLES

For sealing old holes you can use wood- or plastic plugs (Art. No. 160857), if not otherwise specified by the ski manufacturer.

Pict. 20

TROUBLESHOOTING (INCLUDING RENTAL)

Problem	Possible Reason	Solution
Difficulty when stepping in	Non-standard boot sole	Test and select a new boot
	Forward pressure too high	Readjust according to instructions
	Brake jams	Clean, lubricate or replace
Brake does not retract	Obstruction under the brake	Remove, clean, lubricate
	Brake arm bent	Replace brake
	Ski obstructs brake	Replace the standard brake with a wider brake, accordingly to the ski width.
Boot fails pre-season test	Low-quality boot material	Replace boot
	Excessive wear or contamination	Clean, repair or replace boot
	Reference binding worn	Recheck reference binding with a boot that has passed
	Boot does not meet ISO 5355	Replace boot
	Improper use of testing device	Check calibration and operating technique
Excessive in-season class 1 or class 2 deviations	Excessive boot sole wear or contamination	Clean, repair or replace boot
	Inadequate binding service/lubrication	Conduct recommended maintenance every 15–20 days of use
	Improper use of testing device	Check calibration and operating technique
	Indicator correction factor needed	Test system according to pre-season testing. Define indicator correction factor for subsequent adjustments
SINGLE CODE on binding interferes SINGLE CODE on boot	Incorrect template adjustment used when mounting	Set template to proper length and remount heel
	Incorrect track guide scale chosen for given mounting position	Choose binding according to given mounting position

Problem	Possible Reason	Solution
SYMPRO toe wobbles in this track	Toe locking lever not properly engaged in locking holes	Remove toe, clean track. Be sure toe piece locks into place
FREEFLEX- drill pattern not fitting	Toe / equalizing bridge in wrong position	Dismount, place toe in correct position
	Drill template not locked	Re-adjust, drill new holes
Heel slides backwards when customer steps in	Rear locking lever not fully closed or boot length exceeds adjustment range	Lever should fully engage locking teeth in slots on track or boot sole length exceeds binding range
Binding fails pre-season test: release values too high or too low	Reference boot contaminated or worn	Clean or replace boot as indicated by clean vs. lube test result
	Forward pressure set incorrectly	Re-adjust to ELAN recommendations
	Incorrect or off-center-mounting	Check the template. Remount using template correctly
	Improper use of testing device	Check calibration and operating technique
Adult bootsole does not fit into Junior toe lug	Boot sole exceeds the standard tolerance	Clean AFD and boot sole, check standard tolerance, change boot
RACE PRO or POWERRAIL heel wobbles in the track	Heel glide inserts worn	Remove heel and replace plastic heel guides

DEALER SERVICE INFORMATION

DEALER SERVICE

ELAN CERTIFICATION REQUIREMENTS

This section must be read, and thoroughly understood, prior to completion of ELAN's Employee Training Documentation Form and viewing the current ELAN Technical Videos.

At ELAN we realize that the quality added to our products in your shop is every bit as important as the quality we build in at the factory. The ELAN Retailer Indemnity program, which includes in depth technical training, is a key element of maintaining consistent quality.

TECHNICAL INFORMATION

Procedures for installation, release/retention adjustment, testing, troubleshooting and record keeping should always be taken from the current season's ELAN Technical Manual.

EMPLOYEE TRAINING

This manual provides a depth of information unprecedented in the industry; it is here to help you fulfill the shop's responsibility to bring new employees to a basic level of competence. It also addresses our desire to provide information specific to selling, installing, and function checking, and maintaining ELAN products. Last but perhaps most important, we produced it to help you understand why HEAD/ TYROLIA represents the state of the art in bindings .We hope you will use it as part of a well-planned and professional employee training program which goes far beyond properly installing bindings. Done well it will translate into consistent quality and the high level of satisfaction your customers deserve. Look at it as one of the first steps in your Total Quality Management program.

NOTE: Hands on training is the best training – An ideal task that can be incorporated into the training is preseason testing. This will give your trainees hands on experience operating a testing device and adjusting ski/boot/ binding systems. Other tasks, such as routine rental maintenance, can also be done during the training period.

SHOP REQUIREMENTS

Each retail location must have:

- A current Authorized Retailer Agreement on file with Alpina Sports Corp. USA / ELAN Sports, Inc. CANADA
- A current ELAN Binding Indemnification Agreement on file with Alpina Sports Corp. USA / ELAN Sports, Inc. CANADA
- At least one ELAN Certified Technician employed per location.
- The required equipment for installing and testing ELAN bindings. All Agreements and Certifications must be valid for the current season.

SERVICE SHOP TOOLS

This list is the bare minimum a shop can survive with.

- Tape Measure
- ELAN (Tyrolia) Templates

  Drill template 92 W or FAT (Blue)
  Drill template AMBITION (Brown)
  Drill template ADRENALIN (White)
  Drill template ATTACK DEMO (Turquoise)
  Drill template 94 W (Violet)
  Drill template Raceplate WCR
  Drill template RACEPLATE 09 (Black)
  Drill template SP 2003 W or FAT (Red)
  Drill template SR 2003 W (Yellow)

- Variable speed, reversible electric drill
- Step Drill Bits:

  4.1 Ø x 9.0 mm
  4.1 Ø x 7.0 mm
  3.5 Ø x 9.0 mm
  3.5 Ø x 7.0 mm
- Tap, Tap Brace and Tap Guide
- Pozidrive No. 3 screwdriver
- Torx-Bit TX25/50 -1/4inch
- Large slot screwdriver
- Current ELAN retention/release adjustment table
- Approved mechanical testing device
- Screw extractor
- Tap extractor
- Hole plugs, plastic & wood
- Threaded plastic ski inserts
- Chisel
- Hammer

CREATING AN INFORMED CONSUMER

Customers, whether rental or retail, come to your shop with all levels of knowledge. The range extends from true experts who really know the sport and their equipment needs, to never-ever skiers who know they must rely totally on your expertise.

A key role played by a good shop, and a requirement in the U.S. and Canada under the "ELAN Retailer Indemnity Program", is providing information, guidance and instruction to all customers.

SPECIFICALLY THIS MEANS

- Providing product and suitability information to help customers make an informed choice of which equipment models are right for them. The amount and type of advice given will naturally be different for each customer.
- The shop's responsibility is to be sure that each product sold or serviced is appropriate for the needs of its user.
- The shop must provide accurate information about the nature of the sport, and what equipment can and cannot do. Inform customers that there are risks inherent in the sport of skiing that no binding can protect against. It is imperative that each customer be informed there are limitations to the protection their equipment can afford and

that injuries can and do occur in the normal course of skiing and what to do to avoid them to the extent possible.
- Under no circumstances should you make any warranties or assertions about the customer's safety on the hill. Speaking simply, no binding is "absolutely safe". Well-designed shop record forms address the disclosure and agreement subject very directly and professionally. Use them to your advantage by making sure customers read and understand the form before signing it.

The following points must be explained to all customers (rental or retail) before they leave the shop with their equipment (consumer awareness checklist):
- Go through your workshop ticket and fully explain each task that has been performed by the shop.
- Explain how to use bindings and equipment. Let customers put on their boots and step in and out of the binding if needed.
- Remind skiers to clean their boots and bindings each time before stepping in. Tell them that they should always walk through clean snow before entering the bindings.
- Deliver the "Instructions for Use" booklet to retail customers. It is an important document and is essential for warranty service.
- Advise the customers to return to your shop periodically for maintenance and a system inspection. The service interval is once each 15–20 days of skiing, or annually, whichever comes first. Failure to adhere to this service interval will void the ELAN Limited Warranty.
- Recommend care in transport: heels closed, bindings covered.
- Recommend care in storage: dry, moderate temperature, heels closed, and boots not in bindings.
- Explain that bindings and boots must be kept clean for optimal function.
- Skiers should make a visual inspection of their system before each use, including the AFD pad which should be checked for wear, damage or loss. It is also wise to visually verify the release indicator value.

NOTE:
- The workshop ticket must be read, initialed and signed by the customer. If the customer is a minor, his or her signature should be obtained, along with that of the parent or guardian. If a parent or guardian is not available, the equipment should only be released if the proper signatures have been obtained.
- Remember, the customer's signature is required in two places under the terms of the ELAN Retailer Indemnity Program. In order to avoid misunderstandings with the customer, please inform them of this requirement when equipment is taken in for service.
- If the customer is not the end user, every attempt should be made to make certain all aspects of the system are explained to the user, and to obtain his/her signature on the workshop ticket.

ABOUT TESTING

Testing is required for all ELAN retail and rental systems as specified in this manual. Many consumers view system testing as a valuable service provided by professional shops. They expect their equipment will be properly tested, and are willing to pay for it. On the other hand, some customers may be reluctant to accept any additional costs. They may be especially resistant to charges made by the shop for testing and inspections of equipment which is being serviced. Following are some communication techniques that have been found to be helpful:

- Post your shop's testing policy. A clear statement, prominently displayed, will reassure customers that they're all receiving the same treatment. Consider a text similar to the following: "Industry standards have defined shop testing procedures for your ski/boot/binding system. We're proud to offer this service since it is in your best interest. While even the best ski equipment cannot eliminate all risks of injury, we strive to maximize your enjoyment of the sport by verifying the settings and function of your equipment. The extra time and expense of system testing will pay off for you in a better and safer skiing experience."
- Make your service shop a showplace. Place your testing bench in a prominent location. Many customers like to know what kind of work you're doing for them. If you get a question, offer to let the skier watch.
- Proudly display diplomas and certificates received by your mechanics. Make their expertise known to your customers.
- Above all, don't apologize for testing. It's a valuable and necessary service well worth the cost.

ABOUT TESTING DEVICES

ASTM and ISO have defined specifications for ski equipment system testing devices. Only those devices that meet these recognized performance standards should be used to test systems that include ELAN bindings. You should make it the responsibility of your testing device supplier to verify that their device fulfills all ASTM/ISO requirements. Each device has its own unique features and some will fit your shop's needs better than others. Therefore, we can't recommend a single device as universally "the best".

The following points, however, can be used as a guideline to getting the most out of your choice:
- Training is very important in the use of any device. Read the instructions thoroughly, and practice!
- To insure reproducibility from one technician to another a "Multiple Operator Reproducibility Test" should be performed by all users of the testing device. This simply requires that all technicians join in a "round robin" exercise where each tests the same system with the same test device. The goal is to verify that the testing techniques are the same and that all test results are comparable. Speak with your testing device supplier for the details on how to conduct this program.
- Beware of "black box" calculations that may be performed by some electronic testers, the calculations performed to arrive at an indicator value or determine an appropriate Torque Range could be based on old standards. Check the current ELAN Adjustment Chart for applicable values.
- Periodic calibration of these devices is important, and this information should be documented in your shop records.
- Most important, never blindly trust the values given by any test device. This is just one tool to use in your evaluation of a complete release/retention system.

MAINTENANCE

Inform every customer of the simple fact that periodic maintenance is needed. If they don't bring their gear back for regular function checks, it is unreasonable to expect it to work as designed. Studies have shown that binding systems which have not been properly maintained have serious injury rates very much higher than those which have.

Following this simple, logical guideline is the single most effective way to decrease serious injuries dramatically. Have the system serviced by an ELAN certified technician once each 15–20 days of skiing, or annually, whichever comes first.

ELAN DEALER INDEMNITY PROGRAM

Today's equipment may help reduce certain hazards involved in the sport, but the risk of injury remains. The ELAN Retailer Indemnity Program is designed to help formalize service procedures and minimize the risks to both you and your customer.

Under the plan, ELAN will defend and indemnifty the Authorized Retailer in bodily injury claims when certain conditions are met, including following all ELAN required procedures.

The program benefits are not without limits, indemnification is not insurance, and it does not eliminate the need for a shop to have adequate insurance of its own.But, for the shop willing to make the investment in doing a quality job as an assembler of equipment systems from components, it is a key element in their Risk Management plan.

This is only a summary of the ELAN Retailer Indemnify Program; complete requirements are listed in the current ELAN Binding Indemnification Agreement. You should read this Agreement carefully.

Retailer benefits under the terms of the plan are based, in part, on the adequacy of the service work performed by the mechanic. For this reason, thorough employee training is essential. This manual, tech videos and technical seminars are presented by ELAN to help define appropriate shop procedures.

It is the responsibility of the ELAN Authorized Retailer to see that all technical and product information materials provided by Alpina Sports Corp. USA / ELAN Sports, Inc. Canada are ordered and available in their shop. This should be done with the aid of your ELAN Representative while placing your ELAN preseason binding order.

Competition bindings are intended only for high level competitors who have special requirements that do not apply to recreational skiers. Any transaction involving competition bindings must include a warning and assumption of risk agreement signed by the skier that acknowledges the increased risk of using this equipment. See the section in this manual regarding Use of Non-Recommended Settings (Page 95).

THE ELAN RETAILER INDEMNITY PROGRAM APPLIES ONLY TO THE FOLLOWING BINDINGS:

COMPETITION

ER 20.0 (x) FREEFLEX EVO RD, ER 16.0 (x) FREEFLEX EVO RD

RACE

ER 17.0 FREEFLEX EVO, ER 14.0 FREEFLEX EVO, ER 11.0 FREEFLEX EVO, ER 11.0

FUSION

ELX 14.0 GW Fusion Brake 85, ELX 12.0 GW Fusion Brake 85, ELX 12.0 GW Fusion Brake 95, ELX 11.0 GW Fusion Brake 85, EL 11.0 GW Fusion Brake 85

QUICKTRICK

EL 10.0 GW QUICK TRICK Brake 85

SHIFT

ELX 11.0 GW SHIFT Brake 85, ELS 11.0 GW SHIFT Brake 85, ELS 11.0 GW SHIFT Brake 90, EL 10.0 GW SHIFT Brake 85, EL 10.0 GW SHIFT Brake 90, EL 9.0 GW SHIFT Brake 85, ELW 11.0 GW SHIFT Brake 85, ELW 10.0 GW SHIFT Brake 85, ELW 9.0 GW SHIFT Brake 85, EL 7.5 AC SHIFT Brake 78, EL 7.5 AC SHIFT Brake 90, EL 4.5 AC SHIFT Brake 74, EL 4.5 AC SHIFT Brake 84

SET

EL 10.0

AAA SERIES

ATTACK² 18.0 X AT W/O BRAKE , ATTACK² 13.0 AT W/O BRAKE , ATTACK² 13.0 AT DEMO W/O BRAKE , ATTACK² 11 AT DEMO W/O BRAKE , ATTACK² 11 GW W/O BRAKE , AMBITION 12 AT W/O BRAKE

SET JUNIOR/KID

EL 7.5 AC Brake 78, EL 4.5 AC Brake 74

RENTAL

ESP 10.0 GW W/O Brake, ESP 10.0 GW Track PM W/O Brake, ESP 7.5 AC Track PM W/O Brake , ESP 4.5 AC Brake 74, ESP 4.5 AC Track PM W/O Brake , ESR 10.0 Brake 85

RETAILER AGREEMENTS AND INDEMNIFICATION AGREEMENTS

Both Agreements must be completed annually. This year's Retailer and Indemnification Agreements should already be completed; if not please contact customer service or your sales rep. Agreements and Certification Exams should be received at Alpina Sports Corp. USA / ELAN Sports, Inc. Canada no later than December 31, 2018.

An administration fee of $10.00 U.S. per year for each certified

mechanic (max. $ 60.00 U.S. per location) will be charged by ELAN. If a retailer loses his only ELAN certified mechanic, he must notify Alpina Sports Corp. USA / ELAN Sports, Inc. Canada in writing within 48 hours.

SUMMARY OF REQUIREMENTS

These basic requirements help assure that the end product which is delivered to the customer is appropriate.

- Signed, current copies of the ELAN Authorized Retailer Agreement and the ELAN Bindings Indemnification Agreement must be on file with Alpina Sports Corp. USA / ELAN Sports, Inc. Canada.
- The shop must adhere to 2018.19 ELAN procedures for selection, mounting, adjusting, testing and/or servicing of system components as detailed in this manual.
- The actual ELAN retention/release adjustment, or its equivalent, must be used.
- An ELAN Certified Mechanic must properly mount, inspect, adjust and/or service system components and/or check to make sure all service, adjustments, testing and record keeping was properly completed.
- Mechanics must receive full training, including hands-on practice in the use of system testing devices, as provided by the testing device supplier. A multiple operator reproducibility test should be completed and results documented by the shop each season.
- The shop must maintain records of all retail/rental testing and/or service work for 5 years or for the length of the statute of limitations in the state where your business resides, whichever is longer. Bear in mind that the statute of limitations for minors begins only when they come of legal age.

PAPERWORK REQUIREMENTS

ELAN Retail/Rental Workshop tickets have demonstrated their usefulness in the legal system, and we strongly recommend their use. At the very minimum, records must contain the following information:

- Identification of shop and customer: name, address, phone.
- Date of transaction or work.
- Information on which binding settings are based: skier height, weight, skier type, age, boots sole type and length.
- A full description of the equipment being serviced or rented (skis /boots/ bindings), including but not limited to brand, model, size and serial numbers.
- Skier code, “Initial” binding release/retention settings, and final settings.
- Signed, dated statement from the ELAN Certified Mechanic that all manufacturer’s procedures have been completed, and the signature of the mechanic who performed the service (if they are different individuals):
- An agreement dated and signed by the customer, the language of which is substantially similar to the current ELAN form. This agreement must include the following points:
- User verification of skier information.
- WARNING that there are risks of injury inherent in the sport of skiing and that the customer is aware of and accepts those risks.
- DISCLOSURE of the equipment’s limitations, that it will not release, retain or prevent injury under all circumstances, and is no guarantee of the user’s safety.
- RELEASE language whereby the user releases the retailer, manufacturer and distributor from liability and damages, to the fullest extent allowed by law.
- STATEMENT that no warranties of any kind are offered by the shop beyond those explicitly offered by ELAN.
- AGREEMENT that instruction in the use of the equipment has been received, that the skier height, weight, skier type, age, boot sole type and length, as well as the settings on the binding match those on the record form, and that the skier will inspect the system, including the binding’s AFD, before each use.
- Signatures by both the customer and ELAN Certified Mechanic are required by for the ELAN Retailer Indemnity Program.

NOTE:

- Any changes in documentation requirements must be authorized in writing by Alpina Sports Corp. USA. / ELAN Sports, Inc. Canada.
  POST-ACCIDENT INSPECTION REPORT (see page 96).

In addition to the above information on the system’s performance, fill out a Post-Accident Report when you become aware that an injury has occurred. Keep this document for 5 years or the duration of the statute of limitations for minors, whichever is longer.

IN THE EVENT OF AN INJURY CLAIM

- Notification to Alpina Sports Corp. USA / ELAN Sports, Inc. Canada by retailer, of any bodily injury claim, must be made in writing on or before the tenth calendar day from the date on which the retailer first received notice of any such claim. In the event of a lawsuit the retailer must notify his/her own attorney and must cooperate with Alpina Sports Corp. USA / ELAN Sports, Inc. Canada and respond to requests as required.
- In a rental situation, from the time that any injury claim is made to the retailer, the retailer must maintain possession of any equipment that may have been involved in the accident unchanged and safe-kept. (Equipment may be returned to service upon passing a post-accident investigation.)
- In the event of an injury, a Post Accident Report must be completed and retained if the shop is in possession of all components of the system. If the entire system is not available for test it should be noted and all pertinent information such as equipment condition, visual indicator settings, and any equipment abnormalities should be recorded.

NOTE:

ELAN reserves the right to deny indemnity if ELAN requirements are not fulfilled. Strict compliance by the dealer with all requirements, as stated in the ELAN-Binding Indemnification Agreement, is a condition precedent to favorable consideration of a request for indemnity.
This is only a summary. The precise requirements of the ELAN-Binding Indemnification Program are contained in your ELAN-Binding Indemnification Agreement.

DEALER SERVICE

INSTRUCTIONS & PRODUCT WARRANTY

For the proper performance, storage and maintenance of your ski, you must carefully read the following instructions.

Each and every ski needs to be tuned properly and regularly to maintain its performance and safety. Tuning is done on industrial machinery and cannot be copied manually.

Only certified ELAN ski mechanics with knowledge about the handling of service machines should service the skis, set and adjust skis with the correct tools, perform proper binding installation and explain the use and the maintenance of your ski system.

The ELAN skis should only be used with bindings and boots that conform to accepted international standards.

Bindings should be mounted, adjusted and maintained only by certified ELAN ski mechanics in accordance with the manufacturer`s specifications. Proper binding installation is essential for the optimal performance of the product. Improper settings or maintenance may increase the risk of an injury.

Continued use of the skis will create wear and tear on the ski running bases and ski edges. Have your system (skis, boots and bindings) checked, tested and serviced by a certified ELAN ski mechanic, with proper mechanical tools, annually or after every 15 to 20 days of use, whichever comes first. In case the skis do not have the proper service for repairing damage, that could eventually result in delamination, humidity penetrating the wood core, or rust on the inside section of the steel edges of skis.

Skiing is a hazardous activity. The sport of skiing and the use of ski equipment involve a risk of injury to any and all parts of the body. Those dangers are inseparable even from a properly made product. Skiing requires physical preparation, technical skill and caution.

Using skis by children should be done only under child care supervision of certified ski instructor.

Use caution when handling the skis as ski edges are sharp and dangerous.

Use ski bag to protect your skis.

Store skis in a dry place at room temperature, not exposed to direct sunlight or direct sources of heat. Storing of wet skis in unsuitable rooms can result in rust on the steel edges which can again result in destruction, or delamination.

The ski size should not be in discrepancy between the skier's weight and body height and the chosen ski design.

The skis are designed for certain loads only, and the skier is responsible for any excessive force used. The skier must use the proper skiing technique and to avoid shock or overstress skis, which could results in delamination and breakage. The skier should not damage the skies (Striking with tails against hard surface to remove the snow, striking the two skis together (while going up with the lift, as well as during skiing down) scratches). The skis are designed for skiing on snow which is why the skier must avoid shocks against rocks and other hard objects.

- Always ski in control and stay within your ability.
- Chose slopes and conditions for skiing carefully.
- Follow posted warnings and instructions at the ski area.
- Do not ski alone or when you are tired.
- Do not ski while under the influence of alcohol or drugs.
- Familiarize yourself with slopes and possible obstructions before skiing.
- Take lessons from a qualified professional to improve your skills.
- Remove snow and dirt clinging to your skis, boots and bindings before stepping in.
- Make sure that your clothing does not affect to the ski binding system or skis.

Each country could use different ski safety rules of conduct. The customer must inform himself/herself about those various codes of conduct. Keep strictly to the regulations that are in force in the ski resort.

FIS RESPONSIBILITY CODE OF CONDUCT IN SKIING:

1. Respect for others. A skier must behave in such a way that he does not endanger or prejudice others.
2. Control of speed and skiing. A skier must move in control. He must adapt his speed and manner of skiing to his personal ability and to the prevailing conditions of terrain, snow and weather as well as to the density of traffic.
3. Choice of route. A skier coming from behind must choose his route in such a way that he does not endanger skiers ahead.
4. Overtaking. A skier may overtake another skier above or below

and to the right or the left, provided that he leaves enough space for the overtaken skier to make any voluntary or involuntary movement.

5. Entering, starting and moving upwards. A skier entering a marked run, starting again after stopping or moving upwards on the slopes must look up and down the slopes that he can do so without endangering himself or others.
6. Stopping on the piste. Unless absolutely necessary, a skier must avoid stopping on the piste in narrow places or where visibility is restricted. After a fall in such a place, a skier must move clear of the piste as soon as possible.
7. Climbing and descending on foot. A skier either climbing or descending on foot must keep to the side of the piste.
8. Respect for signs and markings. A skier must respect all signs and markings.
9. Assistance. At accidents, every skier is duty-bound to assist.
10. Identification. Every skier and witness, whether a responsible party or not, must exchange names and addresses following an accident.

LIMITED WARRANTY

ELAN warrants to the initial customer that ELAN skis are free from defects in materials and workmanship for a period of 2 years from the date of sale to the initial customer.
For rental skis the warranty period is 1 year from the date of initial purchase.

ELAN disclaims all other warranties express or implied.

Customer`s sole remedy under the warranty is limited to the repair or replacement, at ELAN`s sole option, of the product or parts thereof. Customer should return the product or parts and proof of purchase to the place of purchase for warranty service.

THE WARRANTY CLAIM WILL BE ACCEPTED IN CASE:

- The proper warranty claim procedure has been observed.
- The customer submits evidence justifying the claim. Such evidence can be returned product with defect and the invoices indicating the date of the sale to the customer.
- The warranty term (period) has not expired.
- The ELAN's Quality Assurance Department finds out that the defect has not been caused by reasons beyond the producer's liability.

THE WARRANTY SHALL NOT APPLY IF THE CLAIM IS A RESULT OF ONE OF THE FOLLOWING REASONS:

- Damages due to normal wear and tear,
- Minor damages that does not affect function,
- Any damages caused by abuse or improper use (e.g. striking with tails of skis against a hard surface to remove the snow, striking the two skis together, scratches, overstress of skis or using excessive force on skis, improper ski size, improper binding mounting by person, which is not certified ELAN ski mechanic, shocks with skis against rocks, shocks with the ski`s tip against hard objects, any other impact caused by sharp items, due to torsion, compression, a fall or an abnormal impact...),
- Any damages caused by improper care or storage (e.g. improper storage, improper transportation, improper maintenance, no regular servicing, repairing and tuning skis at certified ELAN ski mechanic, previous repair by person, which is not certified ELAN ski mechanic, modification of the product…)
- Any damages due to non-observance of the instructions or restrictions for use of the products and for its maintenance as defined in product manual.

LIMITATION OF LIABILITY

Your sole remedy under the Limited Warranty shall be limited to the repair or replacement, at ELAN`s sole option, of the product or parts thereof. In no event shall ELAN (or its agents, distributors) be liable for any direct (incidental) or indirect (consequential) damages, or for any cost of transporting or shipping the product, whether the claim is based upon contract, warranty, negligence or product liability, including, without limitation, loss to property, loss of use of the ski or other property, or other economic losses. Neither ELAN nor any distributor or agent shall be liable for contribution or indemnification, whatever the cause. This warranty may not be assigned or transferred.

Some countries do not allow limitations or exclusion on warranties or on certain damages or remedies, so the above exclusions and limitations may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary in different countries.

DEALER SERVICE

ELAN LIMITED WARRANTY

In the case of direct sales from the ELAN web shop, ELAN itself warrants, otherwise ELAN'S authorized distributor in the country in which this product was first sold at retail, warrants to the first retail purchaser or user, that this product shall be free from defects in materials and workmanship. This limited warranty, as well as any implied warranty, shall expire two years from date of the initial retail purchase. For warranty claims or service, the product must be returned at the consumer's expense, in the case of direct sales from the ELAN web shop, to the costumer service address stated in the web shop or otherwise to the place of purchase, or to another authorized ELAN dealer or to the authorized ELAN distributor in the country of purchase. This "Instructions for Use" booklet, the proof of purchase, and proof of periodic service must accompany all bindings returned under warranty.

LIMITATION OF LIABILITY

Cosmetic damage that does not affect function, and any damage caused by abuse, or improper use or misuse, are not covered. Parts subject to normal wear and tear, such as AFD's, brakes, windows, plastic or metal tracks, are not covered.

Your sole remedy under the Limited Warranty or any implied warranty shall be limited to the repair or replacement, at ELANS's and/or its distributor's sole option, of the subject product or parts thereof. In no event shall ELAN or any of its agents, distributors or dealers be liable for incidental or consequential damages or for any cost of transporting or shipping the product, whether the claim is based upon contract, warranty, negligence or product liability, including, without limitation, loss to property other than the bindings, loss of use of any property, or other economic losses. Neither ELAN nor any distributor or dealer shall be liable for contribution or indemnification, whatever the cause. This warranty may not be assigned or transferred. ELAN's obligations under any warranty shall be limited, to the greatest extent allowed by law, as provided in this Limited Warranty. Some states do not allow limitations on implied warranties or on certain damages or remedies, so some or all of these limitations may not apply to you.

This Limited Warranty gives you specific legal rights, and you may also have other rights which vary in different states, provinces and countries.

SERVICE UNDER THE ELAN WARRANTY

Products requiring service under the terms of the warranty should be dealt with as follows:

- Send the complete binding set to the authorized distributor where evaluation will be made and warranty action taken if required.
- If a clear warranty situation exists, and the shop wishes to replace the pair of bindings products out of stock for a customer, the shop may do so after the approval of the ski warranty department of your ELAN distributor.
  Be sure to check suitability and mounting hole pattern before making a change of model.
- When possible, the replacement should be of the same model as the returned product.
- If the same model is not available, the shop should contact the authorized ELAN distributor warranty department for authorization before a more expensive model is selected for replacement.
- If a replacement is made from retailer stock, the complete binding set should be returned to the authorized ELAN distributor as soon as possible.
  The packing list must clearly state which model was used for replacement.
- The "Instructions for Use" booklet (warranty), and proof of purchase must accompany all products returned for consideration.
- No credits will be issued.
- The authorized ELAN distributor reserves the right to deny replacement to the retailer if the alleged problem is not verified or if products are returned without the "Instructions for Use" booklet and proof of purchase.
- Replacement bindings are covered by the warranty stated above.
- Any bindings returned to the authorized ELAN distributor due to inappropriate release values (i.e. values which fall outside the "In-Use" tolerance range on the current ELAN Adjustment Chart) must be accompanied by a completed System Performance Report. The report form is printed in this manual; no warranty action will be taken on release value related claims unless this report accompanies the returned bindings.

DISTRIBUTOR ADDRESSES:

Elan Sports USA
93 Etna Rd.
Lebanon, NH 03766
USA
Toll Free: +1 800 425-7462
Phone: +1 (603) 448 3101
Fax: +1 (603) 448 1586

ELAN Sports, Inc.
81 H. Brunswick Blvd.
Dollar des Ormeaux, QC H9B 2J5
Canada
Toll Free: +1 800 361 7860
Phone: +1 (514) 421 7871
Fax: +1 (514) 421 7394

ELAN RISK MANAGEMENT

Indemnification, Insurance, and your liabilities.

INDEMNIFICATION

Indemnification simply means that someone agrees to reimburse you for certain costs. I In the ski industry it normally means that provided you fully follow all the manufacturer's requirements and instructions, the manufacturer or distributor will provide a suitable defense against related claims by a customer who claims to have suffered bodily injury as a result of using certain equipment. The key here is you must be able to prove you fully followed all the requirements, properly performed the service and properly represented the product. If you do not, you will not be entitled to a defense or indemnification in the event of a claim.

YOUR PERSONAL LIABILITY

It's simple: If you make a mistake which causes harm to another, you can be held liable for it. Be very careful not to make verbal or any other kind of warranties that extend beyond those made by ELAN. Read the manufacturer's literature and warranties carefully. If a feature or benefit is not mentioned there, don't mention it to the customer.

SHOP LIABILITY INSURANCE

No indemnification program is a substitute for liability insurance. Common sense dictates that you should have an insurance policy that covers your shop and employees for commercial general liability and completed operations. Check with your insurance broker.

SHOP PROCEDURES TO REDUCE LEGAL EXPOSURE

Risk Management has become a very important area in virtually every industry. In today's world it is more important than ever to do as much as possible to recognize how and where we might be exposing ourselves to a potentially serious problem. ELAN has defined proper shop practices and how shop personnel and customers need to interact in order to maximize skiing enjoyment while lowering the risks of liability. If these procedures are followed properly, both the skier and the industry are well served. In the event of a mishap, the programs documentation and record keeping system will provide strong evidence of work performed.

YOUR OBLIGATIONS UNDER THE ELAN RETAILER INDEMNIFICATION PROGRAM

Selecting equipment for your customer.

- Make sure the products are suitable for the skiers height, weight, shoe size and level of ability.
- Always make sure your recommendations are consistent with the manufacturer's product description, representation, and specifications.

BINDING SELECTION

Generally, the idea that top of the line products offer the greatest margins for safety as well as performance and durability is correct – provided the skier fits the weight range of the product. Combine this knowledge with our weight and ability recommendations for the skier when selecting a binding.

Avoid selling a product with the idea that the customer will grow into it. If a product is not suitable for their current requirements make another choice. Avoid the temptation to do the customer a favor by rewriting the rules. More often than not, all you will do is cause problems.

At the time of delivery to the customer, the bindings must be accompanied by all the informational materials supplied by the manufacturer, i. e., pamphlets, forms, etc. The product must be fully demonstrated to either the intended user or their parent or legal guardian if the child is a minor. This includes instructions on inspecting the low friction surfaces, cleaning the boot sole, entry of the binding, re-entry after releasing on the hill and exiting the system.

You must also explain what care and maintenance the skier or their parent or legal guardian is responsible for, as well as when to return the equipment to your shop for a thorough function check. Routine maintenance is the most cost effective thing a skier can do to protect their wellbeing.

RACING (X BINDINGS)

Certain binding models are produced by ELAN each year for the exclusive use of qualified competitors under the supervision of ELAN Technical Specialists.

Racing bindings offer release/retention settings outside of those on the ELAN Release/Retention Adjustment Table, which is based upon ISO/ASTM Safety Standards. These bindings can be serviced under the Dealer Indemnity Program if proper procedures are followed.

We recommend you decline to service them and that you warn against their use unless you have training or experience as a race technician and your customer is a high-level competitor who clearly states a need for these bindings. The customer is to be warned that using these bindings significantly increases the risk of injury due to non-release, and that settings exceeding the recommended range are made at the skier's own risk. If you do service racing bindings, you must follow the same procedures described above for making specific comments on the standard workshop form in addition to completing the form on this page to be signed be the skier.

BOOT SELECTION

Make sure the customer's boot choice is consistent with their level of skiing and that the boots meet all current DIN or ISO standards.

SKI SELECTION

Take care to ensure that the skier's intended use of the chosen equipment is consistent with the manufacturer's recommendation for the skier's weight and level of skiing. This is another area where regular maintenance is critical. It is only logical that skis which help keep your customer upright reduce their overall chance of injury.

COMPLETING THE WORK ORDER WITH THE CUSTOMER

It is critical that certain basic information be included on all shop work orders. While we do not require it, the easiest way to make sure the form you use fits ELANS's requirements is to use ours. Once the customer has selected equipment or described the repair or service to be performed, the technician must ask the customer to complete a portion of the Work Order Form which includes their Name, Address, Phone number, Weight, Height, Age, Sex, and Skiing ability. There are few things more embarrassing than having a customer come in to pick up a pair of skis that could not be serviced due to an improperly filled out form, or an unforeseen technical problem.

The best way to avoid this is to have An ELAN Certified technician thoroughly inspect all incoming work, and check the paperwork. The skier must then sign indicating that they have read, understood, and agreed to the terms of your Rental/ Repair agreement (this agreement must comply with ELAN Dealer Indemnity Program requirements). It is also important that the customer be informed that they will be expected to verify in writing that the indicator settings agree with what is written on the form, and that they have been instructed in the use and maintenance of their equipment, and fully understand it.

This procedure must be completed before the transaction is consummated. Remember, the customer has the option of going to another store if the terms of the contract are not acceptable to them, and under no circumstances should the transaction go any further without their signature. The end user, or their agent, must sign the incoming work order.

SHOP PROCEDURES SUMMARY

For in depth details, see the "Binding Installation" section of this manual.

- Follow ELAN procedures for inspection, mounting, adjustment and maintenance as appropriate.
- Confirm that toe and heel indicator values match those specified on the actual ELAN Adjustment Chart.
- Using a calibrated testing device, according to the manufacturer's instructions for use, "exercise" the binding by releasing it at least once in each direction (clockwise and counterclockwise at the toe, vertically at the heel). Then measures Twist and Forward Lean Torque Values. The middle quantitative value of 3 releases in each direction should be used as the test result.
- Compare Twist and Forward Lean test, results with the System Inspection Ranges on the actual ELAN Adjustment Chart.
- After the equipment is adjusted to the skier's needs according to the manufacturer's standards, the certified technician signs the form indicating that the work has been completed according to the manufacturer's specifications.
- With testing complete, the ELAN Certified Technician must complete and sign the workshop ticket. Be sure the Final Indicator Settings are correctly shown there. The workshop ticket should simply reflect that the system has "passed all tests" or that "all manufacturer's procedures have been completed".

PROCEDURES FOR RETAIL CUSTOMER PICK-UP

When the Retail Customer or his representative comes in to pick-up the equipment, the store employee has a fantastic opportunity to improve the skier's safety and enjoyment, while minimizing the risk of a lawsuit later on. All that's involved is properly informing the skier about the realities of skiing and ski equipment.

- Explain the function and operation of the binding, including a review of the manufacturer's pamphlet.
- Explain the settings that show in the release setting windows and how they were derived by referring to the manufacturer's release adjustment charts.
- Explain how much proper maintenance of the entire system (boots, bindings and skis) can improve their enjoyment and margins for safety. Also make it clear that skiing, like any sport, has its risks, and equipment can not eliminate them.

Have the customer sign the form again indicating that they have been instructed on the use of the equipment and that they verified that the visual release indicators on the bindings correspond to the manufacturer's recommended settings shown on the work order ticket.

ARCHIVING RECORDS

Should you become one of the few that must defend against a law suit you will soon find out that the very best defense is made of paper. For this reason we recommend that you start out each ski season with a huge, brand new, manila envelope. Over the course of the season you should fill it with the following items:

- Collect a copy of the technical manual for each and every binding, boot and ski on the market. Be especially diligent with those you carry or work on regularly.
- Copies of the manufacturer's customer instruction booklets.
- Technician employment applications. Make sure they have the address of someone who will always know where they can be found.
- This can be invaluable if you need the technican as a witness.
- A listing of all technician certifications and their dates. Keep all certification records as well.
- Copies of any pertinent wall charts, customer information posters, etc.
- A copy of your shop procedures, including training materials, rental and repair shop practices, and binding setting charts.
- Copies of rental fleet test data.

This type of supporting documentation can be tremendously useful for your lawyer.

STORAGE OF FORMS

All forms containing the customer's signature must be kept for a minimum of five years or the term of the statute of limitations in the state where the injury occurs, or your state, whichever is longer. As a practical matter you have no idea where or when your customer may sustain an injury on this equipment.

Naturally, should an injury occur, keep the original form in a safe place until any claims are completely resolved.

Risk Management is really just common sense. Do your job well, have integrity, keep your customers well informed, and keep proper records. Follow these simple suggestions and you will have very few problems.

USE OF NON-RECOMMENDED SETTINGS

SKIERS REQUESTING SETTINGS NOT RECOMMENDED BY ELAN

The 2018.19 ELAN Release/Retention Adjustment Table is the only adjustment chart recommended for use by ELAN dealers during the 2018.19 season.
Some skiers may request settings different from those in the ELAN Release/Retention Adjustment Table. Most of these concerns can be addressed by following the procedures for reclassifying skier type and for troubleshooting which follow the instructions for using the ELAN Release/ Retention Adjustment Table.
ELAN and the ISO/ASTM standards organizations do not recommend the use of release/retention settings outside of these tolerances, but skiers occasionally may request such settings. ELAN recognizes a skier's right to choose other settings, but if the skier requests settings outside of those derived from the normal procedures for reclassifying skier type and for troubleshooting, the shop may either:
1. Adjust the system to the setting derived from ELAN Release/Retention Adjustment Table and instruct the skier on how to change the setting (if this is done, make a note to this effect on the workshop or rental form), or
2. Adjust the system to the skier's individual request, but only if the technician notes on the workshop or rental form the skier's stated reason for requesting the higher or lower setting.
3. In either case, the customer must verify the request for the higher or lower settings by signing and dating the workshop or rental form by the reason noted next to the setting request, and in addition to making comments on the workshop or rental form, the skier must also read and sign a supplemental warning, release and indemnity agreement identical to the one printed on this page. In such cases, the system will only be indemnified if all other conditions of indemnification are met and the supplemental signed warning, release and indemnity agreement are attached to the completed workshop or rental form.

RACING (X) BINDINGS

Certain binding models are produced by ELAN each year for the exclusive use of qualified competitors under the supervision of ELAN Technical Specialists.

Racing bindings offer release/retention settings outside of those on the ELAN Release/Retention Adjustment Table, which is based upon ISO/ASTM Safety Standards. These bindings can be serviced under the Dealer Indemnity Program if proper procedures are followed.

We recommend you decline to service them and that you warn against their use unless you have training or experience as a race technician and your customer is a high-level competitor who clearly states a need for these bindings. The customer is to be warned that using these bindings significantly increases the risk of injury due to non-release, and that settings exceeding the recommended range are made at the skier's own risk. If you do service racing bindings, you must follow the same procedures described above for making specific comments on the standard workshop form in addition to completing the form on this page to be signed be the skier.

WARNING, LIABILITY RELEASE AND INDEMNITY AGREEMENT FOR NON RECOMMENDED RELEASE/RETENTION SETTINGS OR RACING BINDINGS

I, (name and surname in capital letters)

_____

hereby acknowledge that I have been advised by the _____ rental shop, sales department, etc.) that settings which I have requested for my bindings (Model_____) is not the setting recommended by the manufacturer of the bindings for a skier of my height, weight, age and skier type. I understand and acknowledge that there may be an increased risk of injury or death to me as a result of my own personal preference for these binding settings.
To the fullest extent allowed by law, I RELEASE this shop, all manufacturers, distributors, retailers and other providers of this equipment, all persons who service this equipment, the resort and property owners where this equipment is used, serviced or sold, and all of their agents, employees, officers, directors, owners, sponsors and affiliated persons and companies ("Released Parties"), from ANY AND ALL RESPONSIBILITY OR LEGAL LIABILITY for any injuries, damages or death to any user of this equipment, whether caused by NEGLIGENCE or any other cause. I further agree that I WILL NEVER SUE the Released Parties, and that I WILL DEFEND AND INDEMNIFY the Released Parties if any claim or action is pursued for any injuries, damages or death involving the use of this equipment.
If I am using Competition Bindings, such as ELAN (X) bindings, my doing so is based entirely upon my personal decision to use them. Competition bindings are not intended for use by recreational skiers because they have release and retention features that do not comply with national and international safety standards. I understand and acknowledge that competition bindings are made for high level competitors who, based upon their personal experience, have decided that they have special retention requirements that exceed the capabilities of recreational ski equipment and the standards that apply to recreational ski equipment. I understand and agree that any use of this equipment may significantly increase the risk of injury due to non-release or other events, and **I assume all risk of injury or death that may result from using competition equipment.**

I, the undersigned, have read and understand this **liability release and indemnity agreement**, and agree that it is binding upon me, my heirs, family, guardians, administrators, assigns, and legal representatives. If any part of this agreement is held to be invalid or unenforceable, the remainder shall be given full force and effect.

_____
Skier's Signature
(or that of the skier's parent or guardian)

_____
Shop Manager's Signature

DEALER SERVICE

POST ACCIDENT INSPECTION REPORT

Date of Accident_____
Skier Name _____
Address_____
City, State Zip_____

Workshop Ticket # _____
Skier Phone_____
Witness Name_____
Witness Phone_____

Skier's Description of Accident and Injury

_____

_____

_____ **(use back for additional comments)**

Description of System

						Rented	Purchased
Ski Brand		Model		Size			
		Serial #		Inv.#			
Boot Brand		Model		Size			
Boot Sole Type	☐ Alpine TYPE A (ISO 5355)	☐ Alpine TYPE C (ISO 5355)	☐ Touring TYPE T (ISO 9523)	☐ Walk Sole & Walk To Ride (ISO 9523)	☐ GripWalk (ISO 9523)		
Binding Brand		Model		Size			

Condition of System

	YES	NO	NA
Are the boot soles within industry standards?			
Are all buckles, boot adjustments functioning correctly?			
Are the A.F.D.'s Intact?			
What are the Visual Indicator Settings?			
Is the Forward Pressure set correctly?			
Is the Toe Height set correctly?			
Do the brakes function smoothly?			
Is the ski bent delaminated or damaged?			
Describe:			
Was the equipment returned to service post-accident?			
	Toe	Heel	
What are the Visual Indicator Settings?			

Mechanical System Testing

Testing Device:				Last Calibration date:		
		Clockwise	Ctr Clockwise		Clockwise	Ctr Clockwise
Toe	L			R		
Heel	L			R		

Background

Shop Name _____
Inspected by _____ Inspector Signature _____
Checked By _____ Checker Signature _____

DEALER SERVICE

SYSTEM PERFORMANCE REPORT

Shop Name _____
Phone _____
Address _____
City _____
State Zip _____

Date Report Completed ____/____/____ Workshop Ticket Date ____/____/____
Workshop Ticket # _____
Inspector's Name _____ Position _____

Description of System

						Rented	Purchased
Ski Brand		Model		Size			
		Serial #		Inv.#			
Boot Brand		Model		Size			
Boot Sole Type	☐ Alpine TYPE A (ISO 5355)	☐ Alpine TYPE C (ISO 5355)	☐ Touring TYPE T (ISO 9523)	☐ Walk Sole & Walk To Ride (ISO 9523)	☐ GripWalk (ISO 9523)		
Binding Brand		Model		Size			

System Performance

Boot Sole Length in [mm]		Binding Indicator Setting	Toe	L		R	
Condition			Heel	L		R	
Testing Device		Last Calibration date	/ /				
Chart Date	/ /						
"In Use" Torque Tolerance:		Forward Lean					
		Twist					

Measured Release Values

		Clockwise	Ctr Clockwise		Clockwise	Ctr Clockwise
Toe	L			R		
Heel	L			R		

DEALER SERVICE

BINDING LIST FOR RETAILERS

SEASON 06/07
ER 17.0 FREE FLEX+, ER 11.0 FREE FLEX+, ER 11.0, ELD 14.0 FUSION PRO, ELD 12.0 FUSION PRO, ELD 11.0, FUSION PRO, ELD 12.0 FUSION, ELD 11.0 FUSION, EL 11.0 FUSION, EL 10.0 FUSION, ELW 9.0 FUSION, ELD 11.0 TMD, EL 10.0 TMD, ELW 9.0 TMD Jr, EL 7.0 TMD Jr, EL 4.5 TMD Jr, ELD 14.0, ELD 14.0 Wide, EL 10.0, EL 7.0, EL 4.5, ESP 13.0, ESP 10.0, ESP 7.0, ESP 4.5, EL 11.0 XP

SEASON 07/08
ER 17.0 FREE FLEX+, ER 11.0 FREE FLEX+, ER 11.0 , ELD 12.0 FUSION PRO, ELD 11.0 FUSION PRO, ELD 14.0 FUSION Wide, ELD 12.0 FUSION, ELD 12.0 FUSION Wide, ELD 11.0 FUSION, EL 11.0 FUSION, EL 10.0 FUSION, ELW 11.0 FUSION, ELW 11.0 FUSION Wide, ELW 9.0 FUSION, ELD 11.0 TMD, EL 10.0 TMD, ELW 9.0 TMD Jr, EL 7.0 TMD Jr, EL 4.5 TMD Jr, ELD 14.0, ELD 14.0 Wide, ELW 11.0, EL 10, EL 7.0, EL 4.5, ESP 13.0, ESP 10.0, ESP 7.5, ESP 4.5

SEASON 08/09
ER 17.0 FREEFLEX PRO, ER 11.0 FREEFLEX PRO, ER 11.0, ELX 14.0 FUSION, ELX 12.0 FUSION, ELX 12.0 FUSION Wide, ELX 11.0 FUSION, EL 11.0 FUSION, EL 10.0 FUSION, ELW 11.0 FUSION, ELW 9.0 FUSION, EL 10.0 TMD, ELW 9.0 TMD Jr, EL 7.5 TMD Jr, EL 4.5 TMD Jr, EFR 15.0 Wide, ELX 14.0, ELX 14.0 Wide, ELW 11.0 Wide, EL 10.0, EL 7.5, ELC 7.0, EL 4.5, ELN 10.0, ELN 7.0, ELN 4.5, ESP 13.0, ESP 10.0, ESP 7.5, ESP 4.5

SEASON 09/10
ER 17.0 FREEFLEX PRO, ER 11.0 FREEFLEX PRO, ER 11.0, ELX 14.0 FUSION, ELX 12.0 FUSION, ELX 12.0 FUSION Wide, ELX 11.0 FUSION, EL 11.0 FUSION, EL 10.0 FUSION, ELW 11.0 FUSION, ELW 9.0 FUSION, EL 10.0 TMD, ELW 9.0 TMD Jr, EL 7.5 TMD QUICK TRICK, EL 4.5 TMD QUICK TRICK, EFR/FS 18.0 XFAT, EFS 14.0 Wide, ELX 14.0, ELW 11.0 Wide, EL 10.0, EL 7.5, ELC 7.0, EL 4.5, ESP 13.0, ESP 10.0, ESP 7.5, ESP 4.5

SEASON 10/11
ER 17.0 FREEFLEX PRO, ER 11.0 FREEFLEX PRO, ER 11.0, ELX 14.0 FUSION, ELX 12.0 FUSION, ELX 12.0 FUSION Wide, ELX 11.0 FUSION, EL 11.0 FUSION, EL 10.0 FUSION, ELW 11.0 FUSION, ELW 9.0 FUSION (Lady), EL 10.0 TMD, EL 10.0 QT, ELW 9.0 TMD Jr, ELW 9.0 QT Jr, EL 7.5 QT Jr, EL 4.5 QT Jr, EFR/FS 18.0 XFAT, EFS 15.0 Wide, EFS 14.0 Wide, ELX 14.0, ELW 11.0 Wide, EL 10.0, EL 7.5, ELC 7.0, EL 4.5, ESP 13.0, ESP 10.0, ESP 7.5, ESP 4.5, ESR 10.0

SEASON 11/12
ER 17.0 FREEFLEX PRO, ER 11.0 FREEFLEX PRO, ER 11.0, ER 11.0 Wide, ELX 14.0 FUSION, ELX 12.0 FUSION, ELX 12.0 FUSION Wide, ELX 11.0 FUSION, EL 11.0 FUSION, EL 10.0 FUSION, ELW 11.0 FUSION, ELW 9.0 FUSION, EL 10.0 TMD, EL 10.0 QT, ELW 9.0 TMD Jr, ELW 9.0 QT Jr, EL 7.5 QT Jr, EL 7.5 QT Jr Wide, EL 4.5 QT Jr, EL 4.5 QT Jr Wide, EFR/FS 18.0 XFAT, EFS 15.0 Wide, ELX 14.0, ELW 11.0 Wide, EL 10.0, EL 10.0 Wide, EL 7.5, ELC 7.0, EL 4.5, ESP 13.0, ESP 10.0, ESP 7.5, ESP 4.5, ESR 10.0

SEASON 12/13
ER 17.0 FREEFLEX PRO, ER 11.0 FREEFLEX PRO, ER 11.0, ER 11.0 Wide 97, ELX 14.0 FUSION, ELX 12.0 FUSION, ELX 12.0 FUSION Wide 88, ELX 11.0 FUSION, ELW 11.0 FUSION, EL 11.0 FUSION, EL 10.0 FUSION, ELW 10.0 FUSION, EL 10.0 QT, EL 10.0 QT Wide 90, ELW 9.0 QT, EL 7.5 AC QT, EL 7.5 AC QT Wide 90, EL 4.5 AC QT, EL 4.5 AC QT Wide 84, EFS 18.0 w/o brake, EFS 15.0 w/o brake, ELX 14.0 w/o brake, ELW 11.0 w/o brake, EL 10.0, EL 10.0 Wide 90, ADRENALIN 16 w/o Short, ADRENALIN 16 w/o Long, SET Junior/Kid, EL 7.5 AC, EL 4.5 AC, ESP 13.0 w/o brake, ESP 10.0, ESP 7.5, ESP 4.5 AC, ESR 10.0

SEASON 13/14
ER 17.0 FREEFLEX PRO, ER 11.0 FREEFLEX PRO, ER 11.0, ELX 14.0 FUSION, ELX 12.0 FUSION, ELX 12.0 FUSION Wide 88, ELX 11.0 FUSION, ELW 11.0 FUSION, EL 11.0 FUSION, EL 10.0 FUSION, ELW 10.0 FUSION, EL 10.0 QT, EL 10.0 QT Wide 90, ELW 9.0 QT, EL 7.5 AC QT, EL 7.5 AC QT Wide 90, EL 4.5 AC QT, EL 4.5 AC QT Wide 84, EFS 18.0 w/o brake, EFS 12.0 w/o brake, EFS 10.0 Wide 90, EL 10.0, ADRENALIN 16 w/o Short, ADRENALIN 16 w/o Long, ADRENALIN 13 w/o Short, ADRENALIN 13 w/o Long, ATTACK 16 w/o brake, ATTACK 13 w/o brake, AMBITION 12 w/o brake, EL 7.5 AC, EL 4.5 AC, ESP 13.0 w/o brake, ESP 10.0, ESP 7.5 AC, ESP 4.5 AC, ESR 10.0

SEASON 14/15
ER 17.0 FREEFLEX PRO, ER 11.0 FREEFLEX PRO, ER 11.0, FUSION, ELX 14.0 FUSION, ELX 12.0 FUSION, ELX 12.0 FUSION Wide88, ELX 11.0 FUSION, ELW 11.0 FUSION (Lady), EL 11.0 FUSION, EL 10.0 FUSION, ELW 10.0 FUSION (Lady), EL 10.0 QT, EL 10.0 QT Wide90, ELW 9.0 QT (Lady), EL 7.5 AC QT, EL 7.5 AC QT Wide90, EL 4.5 AC QT, EL 4.5 AC QT Wide84, EFS 18.0 w/o brake, EFS 12.0 w/o brake, EFS 10.0 Wide90, EL 10.0, ADRENALIN 13 w/o Short, ADRENALIN 13 w/o Long, ATTACK 16 w/o brake, ATTACK 13 w/o brake, ATTACK 13 DEMO w/o brake, AMBITION 12 w/o brake, AMBITION 10 w/o brake, EL 7.5 AC, EL 4.5 AC, ESP 10.0 w/o brake, ESP 10.0, ESP 7.5 AC, ESP 4.5 AC, ESR 10.0

SEASON 15/16
ER 17.0 FREEFLEX PRO, ER 11.0 FREEFLEX PRO, ER 11.0, ELX 14.0 FUSION, ELX 12.0 FUSION, ELX 12.0 FUSION WB95, ELX 11.0 FUSION, ELW 11.0 FUSION (Lady), EL 11.0 FUSION, EL 10.0 FUSION, ELW 10.0 FUSION (Lady), EL 10.0 QT, EL 10.0 QT WB90, ELW 9.0 QT (Lady), EL 7.5 AC QT, EL 7.5 AC QT WB90, EL 4.5 AC QT, EL 4.5 AC QT WB84, EFS 10.0 WB90, EL 10.0, ADRENALIN 13 w/o Short, ADRENALIN 13 w/o Long, ATTACK 18 (X) w/o brake, ATTACK 16 w/o brake, ATTACK 13 w/o brake, ATTACK 13 DEMO w/o brake, ATTACK 11 w/o brake, AMBITION 12 w/o brake, EL 7.5 AC, EL 4.5 AC, ESP 10.0 w/o brake, ESP 10.0, ESP 7.5 AC, ESP 4.5 AC, ESR 10.0. Racing (X) Word Cup models: ER 20.0 FREE FLEX+, ER 16.0 FREE FLEX+, ER 20.0 FREE FLEX PRO, ER 16.0 FREE FLEX PRO, ER 20.0 FREE FLEX EVO, ER 16.0 FREE FLEX EVO

SEASON 16/17
ER 20.0 X FREEFLEX EVO RD, ER 16.0 X FREEFLEX EVO, ER 17.0 FREEFLEX EVO, ER 14.0 FREEFLEX EVO, ER 11.0 FREEFLEX EVO, ER 11.0, ELX 14.0 Fusion, ELX 12.0 MBS Fusion, ELX 12.0 Fusion, ELX 11.0 Fusion, EL 11.0 MBS QUICK TRICK, EL 10.0 QUICK TRICK, ELS 11.0 SHIFT, EL 11.0 SHIFT, EL 10.0 SHIFT, EL 9.0 SHIFT, ELW 11.0 SHIFT (Lady), ELW 10.0 SHIFT (Lady), ELW 9.0 AC SHIFT (Lady), EL 7.5 AC SHIFT, EL 4.5 AC SHIFT, EL 10.0, ATTACK² 18.0 X AT W/O BRAKE, ATTACK² 16 AT W/O BRAKE, ATTACK² 13 AT W/O BRAKE, ATTACK² 13 AT DEMO W/O BRAKE, ATTACK² 11 AT DEMO W/O BRAKE, ATTACK² 11 GW W/O BRAKE, AMBITION 12 AT W/O BRAKE, EL 7.5 AC, EL 4.5 AC, ESP 10.0, ESP 10.0 Track, ESP 7.5 AC Track, ESP 4.5 AC, ESP 4.5 AC Track, ESR 10.0

SEASON 17/18
ER 20.0 X FREEFLEX EVO RD, ER 16.0 X FREEFLEX EVO, ER 17.0 FREEFLEX EVO, ER 14.0 FREEFLEX EVO, ER 11.0 FREEFLEX EVO, ER 11.0, ELX 14.0 Fusion, ELX 12.0 MBS Fusion, ELX 12.0 Fusion, ELX 11.0 Fusion, EL 11.0 FUSION, 11.0 MBS QUICK TRICK, EL 10.0 QUICK TRICK, ELS 11.0 SHIFT, EL 11.0 SHIFT, EL 10.0 SHIFT, EL 9.0 SHIFT, ELW 11.0 SHIFT (Lady), ELW 10.0 SHIFT (Lady), ELW 9.0 AC SHIFT (Lady), EL 7.5 AC SHIFT, EL 4.5 AC SHIFT,EL 10.0, ATTACK² 18.0 X AT W/O BRAKE, ATTACK² 16 AT W/O BRAKE, ATTACK² 13 AT W/O BRAKE, ATTACK² 13 AT DEMO W/O BRAKE, ATTACK² 11 AT DEMO W/O BRAKE, ATTACK² 11 GW W/O BRAKE, AMBITION 12 AT W/O BRAKE, EL 7.5 AC, EL 4.5 AC, ESP 10.0, ESP 10.0 Track, ESP 7.5 AC Track, ESP 4.5 AC, ESP 4.5 AC Track, ESR 10.0

DEALER SERVICE CHECKLIST

USED BINDING CHECKLIST

1. Customer concerns
2. Service bulletins – maintenance
3. Suitability
4. Availability – parts/tools/technical info
5. Boot/binding compatibility
6. Compatibility of under-binding options
7. Defects:
   a) parts – cracked/corroded/missing
   b) boot contact area – worn/damaged
   c) boot contact area – contaminated
   d) screws – missing/protruding
   e) brake/rollers/AFD – malfunctioning
   f) positioning/alignment – incorrect
8. Binding to boot adjustments
9. INITIAL ASSESSMENT
10. Tests:
    a) screw tightness
    b) antishock travel
    c) compatibility (if indicated)
    d) release indicator verification
    e) accelerated life cycle (with permission)
11. FINAL ASSESSMENT

USED SKI CHECKLIST

1. Customer concerns
2. Service bulletins – tuning requirements
3. Suitability
4. Defects:
   a) delaminated
   b) edge pulled out
   c) cracked side wall
   d) warped, bent, twisted
   e) damaged tip / tail protector
   f) lost camber
5. INITIAL ASSESSMENT
6. Base/edge condition / thickness
7. Base/edge profile
8. FINAL ASSESSMENT

USED BOOT CHECKLIST

1. Customer concerns
2. Service bulletins – fitting requirements
3. Suitability
4. ISO sole dimensions – Adult/Child
5. Sole hardness/material
6. Defects:
   a) sole – warped
   b) contact area – damaged/worn
   c) contact area – contaminated
   d) shell/liner/buckle – damaged
7. Type/position of foot bed/fitting aids
8. INITIAL ASSESSMENT
9. Fit:
   a) foot anomalies
   b) foot/boot size comparison
   c) foot in boot evaluation
10. Performance adjustments
11. FINAL ASSESSMENT

NOTES:

GLOBAL DISTRIBUTORS

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ELAN is fully committed to a comprehensive environmental management system to minimize its impact on nature, as verified by the environmental standard ISO 14001.

ELAN, d. o. o., Begunje na Gorenjskem, Slovenia, December 2016.