

HEAD

TYROLIA



TECHNICAL MANUAL

2011.12

ALPINE SKI BINDINGS

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SKI BINDINGS 2011.12

RELIABILITY, QUALITY, COMPETENCE AND CONTINUAL IMPROVEMENT

With its constant innovation philosophy and a perfect understanding of the market, TYROLIA secures a strong leadership position in the alpine ski binding sector. For the last 80 years, TYROLIA has been the driving force for new developments and technologies. Functionality, continual improvement and high quality service guarantee dealers, ski manufacturers as well as consumers, a high-tech product with unique safety features.

HISTORY AND MILESTONES

The company located in Schwechat, Austria, was founded in 1847 as "Wiener Metallwaren-, Schnallen- und Maschinenfabrik GmbH". The first ski binding was manufactured in 1928. Ten years later, industrial production was established and in 1949 the first TYROLIA branded ski binding was produced. The following decades were full of outstanding developments in the ski binding sector, resulting in the modern high-tech products which everyone now appreciates in modern ski sports such as alpine skiing. The product range of TYROLIA offers the perfect ski binding for every type of skier: whether for racing, freeskiing, park & powder, juniors or rental dealers - perfect performance and easier handling are obvious benefits.

PARTNER

Everything under one roof. TYROLIA responds as rapidly as possible to the needs of the market and its customers, enabled by a wide vertical range of manufacturing processes and a faster time to market for development of new products. Well known brands like HEAD, FISCHER and ELAN have entrusted the market leader TYROLIA for many years and recognize its competence.

Moreover, small and independent ski manufacturers choose TYROLIA bindings as the perfect partner for their skis, e.g. 4FRNT, Amplid, Liberty, Kessler, Armada, Palmer and Blossom



elan



amplid

liberty

KESSLER

ARMADA

PALMER

Blossom
SKIS

1847 The "Wiener Metallwaren, Schnallen und Maschinenfabrik GmbH" was founded in Schwechat/Austria

1928 First Ski binding produced in the Schwechat factory

1949 First TYROLIA branded ski binding

1953 World's first safety fore-clamp » TYROLIA Ski Master

1962 TYROLIA-Rocket - World's first automatic heel

1964 TYROLIA Clix Heel

1973 TYROLIA Diagonal Heel

1979 TYROLIA 60 series

1986 4-roller Spring Pincer System

1989 Freeflex System

1996 ABS - Anti Blocking System

1999 Freeflex Plus

2000 TYROLIA becomes world market leader

2001 ISO-Certification 9001:2000



TYROLIA is the first company in the binding industry to be certified according to the ISO 9001:2000 standard.

The TÜV has certified that TYROLIA meets the highest standards for quality consciousness and international corporate structure.

2002 Railflex System

2008 Freeflex Pro & Race Pro Heel

2009 Literail and TYROLIA Carbon Prestige

2010 Powerrail

2011 LX toe and SX Product Line

NEWS 2011.2012

KID PLATE 7

The new Kid Plate 7 provides additional stand height of 7 mm for SL 45 bindings. It is available in two different lengths - a short and long version. With a pre-mounted Kid Plate 7 no more drilling is necessary for mounting the SL 45 bindings. The new Kid Plate 7 is also super light with only 100g additional weight per plate.

Height: 7 mm

Boot Sole Length: Short: 171-274 mm, Long: 211-314 mm

Features:

- Two-Part Plate for more flexibility
- Increased torsion stability, control and edge grip
- Oblong Holes to maintain ski flexibility
- Two Drilling and Mounting Positions
- Super Light



Kid Plate 7 Short (20 prs) Art. No. 131125 black
Kid Plate 7 Long (20 prs) Art. No. 131126 black

NEW FAT DRILL TEMPLATE

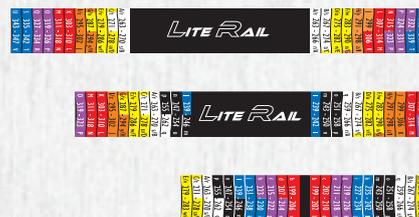
Standard templates can be used for skis from 59 to 108 mm width. With the new FAT drill templates and the enlarged clamping width bindings can be mounted easily on wider skis from 104 up to 154 mm even without the adapter set.

- Template 92 FAT (Art. No. 162868)
- SP 2003 FAT (Art. No. 162879)

SINGLE CODE STICKER LITERAIL

Tuned for Rental - stick the new LiteRail Single Code Stickers on the LiteRail bases to obtain a full rental version of LiteRail: the scale on the stickers shows the rental single code for fast and easy adjusting to the correspondent boot sole length. Stickers are available for all length of LiteRail mid parts:

- LiteRail Large Single Code Sticker (Art. No. 162925)
- LiteRail Medium Single Code Sticker (Art. No. 162924)
- LiteRail Small Single Code Sticker (Art. No. 162923)



BINDING MODELS WITHOUT BRAKE

Starting with the Line 2011.12 HEAD/TYROLIA offers some bindings models without brake, marked "w/o brake" to avoid brake exchanges later on and to provide suitable brakes for different ski widths.

Please note: For these models you need to order appropriate brakes separately.

Optional brake types can be identified in the brake overview (see page 56-59).

NEW 150 MM BRAKE

Furthermore, for 2011.12 HEAD/TYROLIA offers even fatter brakes. With the new Power Brake 150 mm for Race Pro and LD heels, the XXFat Brake fits skis up to 150 mm width in the brake area of the ski.

Power Brake Race Pro XXFAT 150 (1 pair) - Art. No. 162958

Power Brake LD XXFAT 150 (1 pair) - Art. No. 162959

FREERIDE BRAKES

To service the needs of all segments, TYROLIA offers brakes with higher bended brake arms to avoid troubles especially at switch skiing/landing.

Power Brake LD wide 88 FR (1 pair) - Art. No. 162956

Power Brake Race Pro wide 88 FR (1 pair) - Art. No. 162957

SX/LX - NEXT GENERATION OF SKI BINDINGS

2011.12 - KICK-OFF OF THE NEWLY REDESIGNED BINDING PRODUCT LINE, FEATURING IMPROVED FUNCTION AND A MORE DYNAMIC SKI STEERING APPROACH.

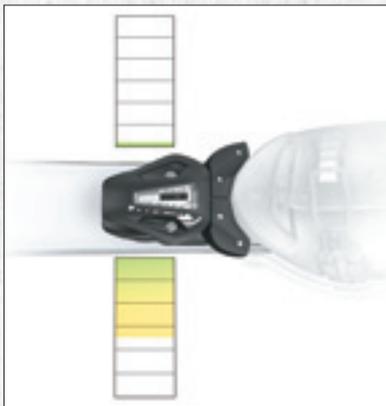
The HEAD/TYROLIA LX toe and SX product line was developed with new kinematics for binding toes, based on laboratory measurements and tests. The advantages for ski bindings: enhanced performance and safety!

The improvements from the new construction are easily measurable for every skier:

Enhanced stability:

- Horizontally
- Vertically
- Plus - considerably improved canting stability

ENHANCED STABILITY PROVIDES PERFORMANCE IMPROVEMENTS FOR EVERY SKIER, BASED ON NEW KINEMATICS:



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



Vertically - whether icing up, dirt or boot wear, the ski boot is always precisely secure due to the linear adaptation to the height of the ski boot sole. This ensures exact and direct ski steering.



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



Additional performance related enhancements include better boot centering and return to center force.

Those kinematic improvements are reflected in the product design as well, and define the basics for the new HEAD/TYROLIA product line and binding family, focusing on the functional structure of the new binding generation. With the new kinematics we were able to define the roller pincers, which secure the ski boots, as separate elements.

With their distinct "eyes", the "face" of the new SX toe, with its high cheek bones reminds of a fox - smart, spry, agile and very clever, whereas the performance oriented LX toe defines stability and power, much as a strong and tough bull would extremely durable and absolutely reliable.

A new developed weight-optimized adapter, with a new Anti-Friction Slider provides increased safety in all PowerRail binding models.



The next generation of ski binding toes - for a more enjoyable skiing experience and renewed dynamics!



HEAD/TYROLIA is awarded with the red dot award: product design 2011 for LX and SX toes and binding line, as well as with the Plus X Award for High Quality and Design for the SX bindings.

SAFETY FEATURES

ONLY PERFECTION PROVIDES SAFETY

TYROLIA has dedicated itself especially to Active Safety as a core characteristic. Unique safety features, such as the exclusive TYROLIA ABS band and TYROLIA Diagonal Heel offer optimal all-around protection for every skier.



TRP TOE SYSTEM

The **TYROLIA Roller Pincer - Toe System (TRP System)** of the TYROLIA 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.

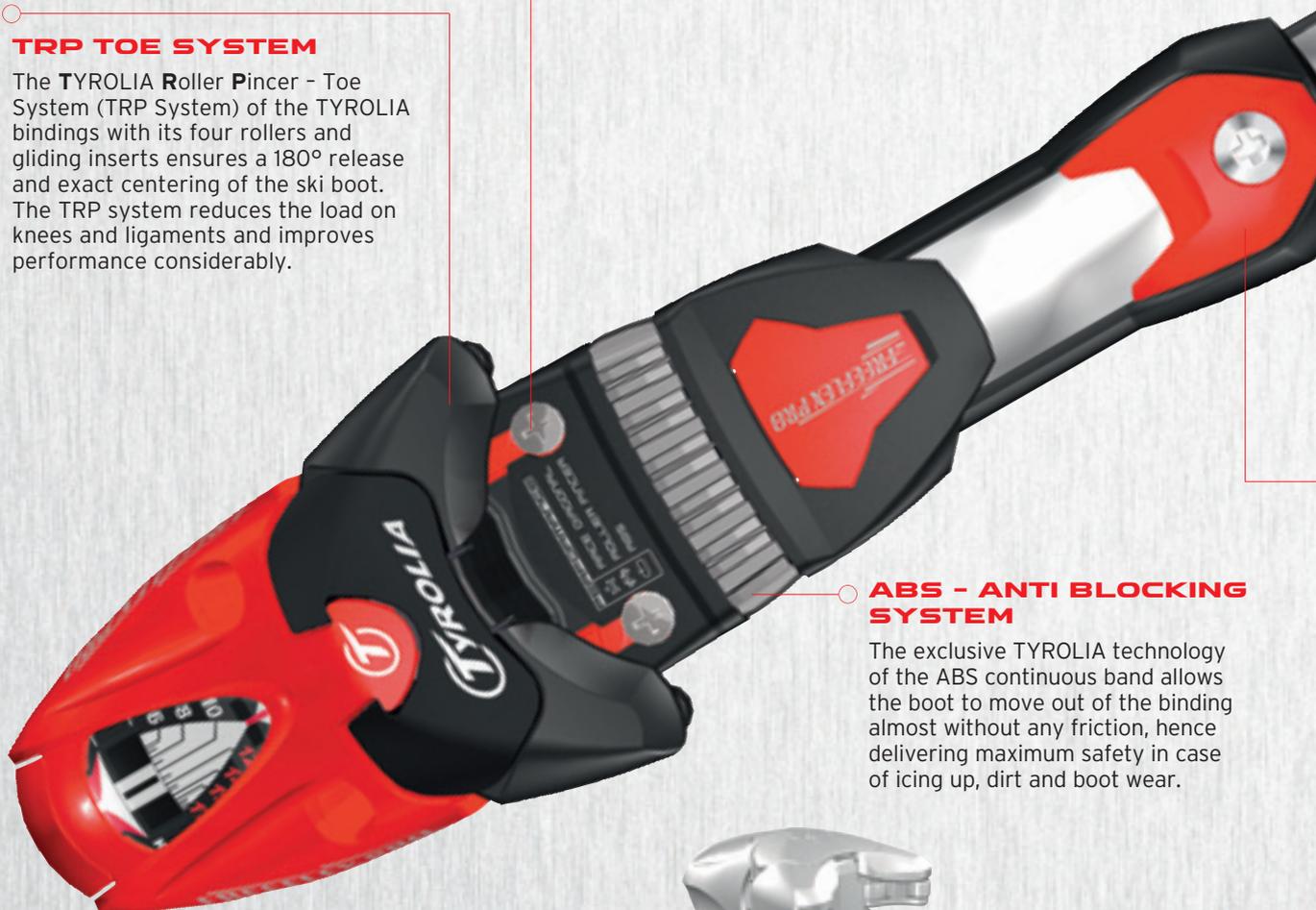
RACE DIAGONAL VS. FULL DIAGONAL TOE

Race Diagonal:

Diagonal Toe tuned for racing purposes. Due to its higher release force vertically than horizontally, it holds up to the high backward lean forces in racing.

Full Diagonal:

Intelligent 180° release both horizontally and vertically of the Diagonal Toe and therefore maximum safety in backward twisting-fall situations.



ABS - ANTI BLOCKING SYSTEM

The exclusive TYROLIA 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.



HIGH TECH & HIGH QUALITY

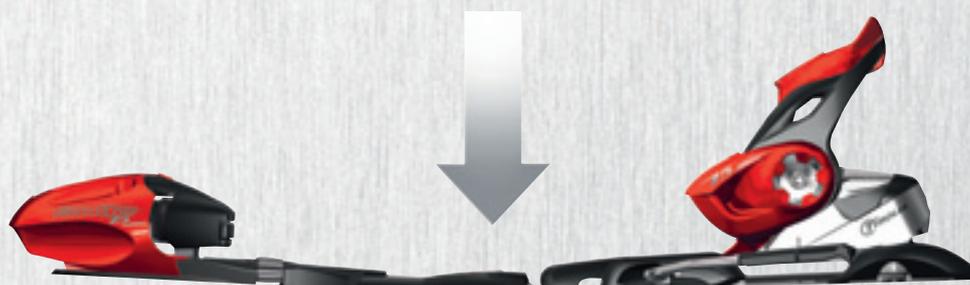


RACE PRO HEEL

The stand height is according to the actual FIS rules. An increased contact area reduces friction and provides constant forward pressure in all skiing situations.

FREEFLEX PRO

Best performance enabled by the new, 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 ski steering.



ONLINE DEALER SUPPORT

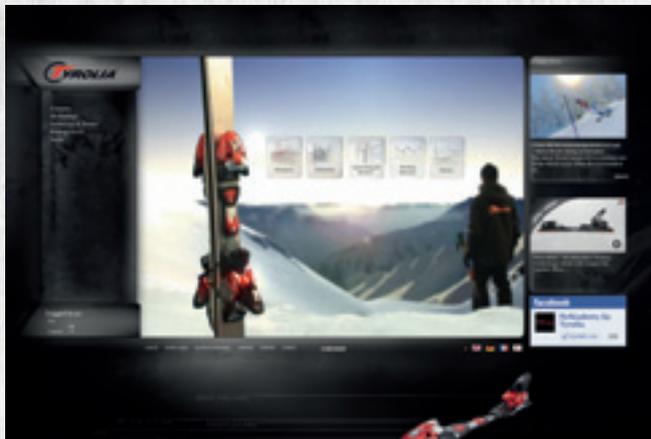
WWW.TYROLIA.COM

The wishes and needs of the dealers are TYROLIA's top priority. In order to guarantee that on-line service is also the best possible, the Dealer Website has been expanded and improved even further. Moreover the certification videos are now available at TYROLIA's online dealer area.

SIMPLE LOG-IN FOR USING THE DEALER AREA

Select your country (e.g. USA) in the tool box for dealers and enter this in lower case characters as the password (e.g. usa). If the required country is not available on the list, please select "others".

- GO TO WWW.TYROLIA.COM
- SELECT YOUR COUNTRY (USA)
- ENTER PASSWORD (USA)



TECHNICAL INFORMATION

Under the item "New Spare Part OMS" you can access the Dealer Spare Part Online Management System starting 2009, and under "Spare Part Search until 2008/09" you still can locate all the replacement parts from the last five years. Or download the Technical Manual and the Technical Data Catalog ready to print out.

- SELECT "TECHNICAL INFO"
- FIND ALL AVAILABLE SPARE PARTS
- DOWNLOAD TECHNICAL MANUALS AND DATA CATALOG

Furthermore, an archive with the HEAD/TYROLIA Technical Manuals of the last 7 years back to season 2004/2005 is available.



RENTAL SYSTEMS

The entire TYROLIA Rental Line is available online. All TYROLIA rental products are listed. Here you can download extensive information about the proven technologies and philosophy behind the rental business.

- GO TO "RENTAL SYSTEMS"
- FIND ALL RENTAL PRODUCTS
- DOWNLOAD INFORMATION



WORKSHOP TOOLS & AIDS

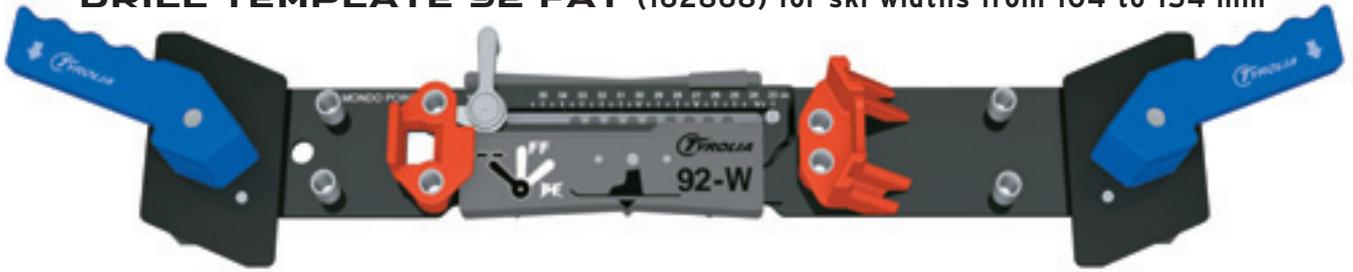
Tool	Packed/art. nr.
 <ul style="list-style-type: none"> • Drill Template Adapter-Set (adapter for TYROLIA-Templates) 	per piece 162569
 <ul style="list-style-type: none"> • Drill 4.1 Ø x 7.0 mm long • Drill 4.1 Ø x 9.0 mm long • Drill 3.5 Ø x 7.0 mm long • Drill 3.5 Ø x 9.0 mm long • Drill-set complete 	per piece 162772 per piece 162773 per piece 162770 per piece 162771 per set 162774
 <ul style="list-style-type: none"> • Screwdriver for all adjustment screws • Screwdriver + magnetic bit (160805) • Handy Ratchet incl. bits (162575 + 162576) • Slotted Screw Bit for Handy Ratchet • Pozidrive 3 Bit for Handy Ratchet 	per piece 160806 per piece 162800 per piece 162574 per piece 162575 per piece 162576
 <ul style="list-style-type: none"> • Universal bit for Screwdriver 162800 and electric drivers hexagon. 1/4" (6.35 mm) • Screwdriver for electric driver (Black & Decker, Skill, Thor, Atlas-Copco, Virax, Consolidated, Bosch, Ingersoll-Rand), hexagon. 1/4" (6.35 mm) • Screwdriver for electric driver (Bosch, Metabo, AEG), hexagon. 1/4" (5.5 mm) • Screwdriver for electric driver (Fein, AEG) 	per piece 160805 per piece 160802 per piece 160803 per piece 160804
 <ul style="list-style-type: none"> • Special set for repairs • Drill bit for repair set • Special plastic plugs for repair set 	per set 162127 per piece 162128 1 set = 50 piece 162129
 <ul style="list-style-type: none"> • Plastic plugs mixed • Plastic plugs silver 	500 piece 160857 500 piece 162856
 <ul style="list-style-type: none"> • Service-Grease-Spray (500 ml) • TYROLIA Grease • TYROLIA Glue 	per piece 162779 per piece 160052 per piece 160858
 <ul style="list-style-type: none"> • Rubber band for brake 	10 pieces 162562
 <ul style="list-style-type: none"> • Brake Retainer for all POWER BRAKE-Models • Brake Retainer for all KID-Models 	per pair 162769 per pair 162869
 <ul style="list-style-type: none"> • Rental Boot Indicator (Single Code, mm) • Slide (replacement) for Rental Boot Indicator 	per piece 162617 per piece 162518
 <ul style="list-style-type: none"> • Tibia-Chart • Release/retention chart (weight method, new ASTM and ISO-Standard, DIN A3, water resistant, English Version) 	per piece 169431 per piece 169758
 <ul style="list-style-type: none"> • SINGLE CODE Rental Boot Stickers (5 sheets) 	per set 162561

TEMPLATES



DRILL TEMPLATE SELECTION

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



HEAD

LINE 11.12

FREEFLEX PRO 20 X RD, FREEFLEX PRO 20 X RS, FREEFLEX PRO 18 X Sale, FREEFLEX PRO 16 X RD, FREEFLEX PRO 16, FREEFLEX PRO 14, FREEFLEX PRO 11, GTO 15, MOJO 18 X, MOJO 15, MOJO 12, MOJO 11, MOJO 7.5, LX 12 WIDE 88, SX 10, SL 90 ABS JR RACE, SL 75

EARLIER LINES

FREEFLEX PRO 16, FREEFLEX PRO 14, FREEFLEX PRO 12, FREEFLEX PRO 11 LD, FREEFLEX PLUS 17, FREEFLEX PLUS 11, LD 12 CYBER, MOJO 20 X, LD 12, LD 12 WIDE 88, SL 110 ABS, SL 100, ONE LD 12, ONE SL 90, SL 75 ABS, SL 70 AC

TYROLIA

LINE 11.12

FREEFLEX PRO 17, FREEFLEX PRO 14, FREEFLEX PRO 11, PEAK 18 X T. H., PEAK 15 T. H., PEAK 15, PEAK 12, PEAK 11, PEAK 7.0 AC, LD 12, SX 10, SL 100, SL 70 AC

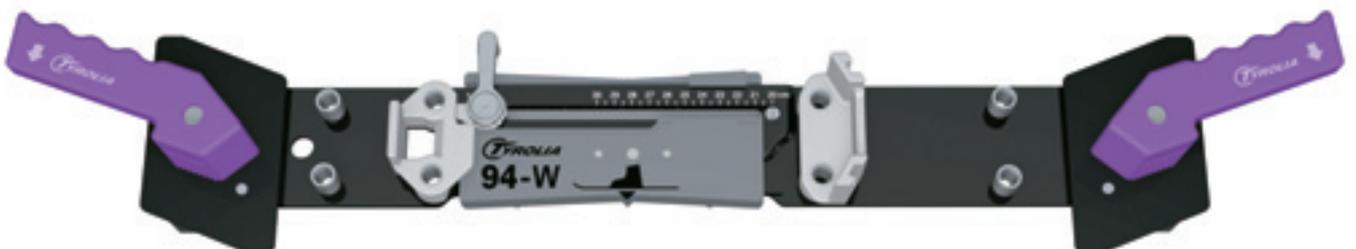
EARLIER LINES

FREEFLEX PRO 18 X, FREEFLEX PRO 15, FREEFLEX PLUS 18 X, FREEFLEX PLUS 15 X, FREEFLEX PLUS 17, FREEFLEX PLUS 15, FREEFLEX PLUS 14, FREEFLEX PLUS 11, PEAK 18 X, SLD 11 ABS, LD 12 CYBER, LD 12 S, LD 10, MOJO 20 (X), MOJO 15, MOJO 11, MOJO 7, SL 110 CARVE ABS, SL 110 ABS, SL 110 S ABS, SL 100 CARVE ABS, SL 100 ABS, SL 100 CARVE, SLW 90 ABS, SL 75, SL 70 ABS, SL 70 CARVE ABS, SL 70

TYROLIA INSIDE

AMPLID: AMPLID FTF, AMPLID DZN **4FRNT:** DEADBOLT 18, DEADBOLT 15, DEADBOLT 13, PADLOCK 11, PADLOCK 7
KESSLER: FREEFLEX PRO 14, **LIBERTY:** LIBERTY 15, **SP 2000:** SL 70 AC V3TEC, **ZAG:** QZ 14 FAT 115

DRILL TEMPLATE 94 W (162761)



HEAD

LINE 11.12

SL 45

TYROLIA

LINE 11.12

SL 45

DRILL TEMPLATE BASES & PLATES (162865)



HEAD

LINE 11.12

POWERRAIL PRO BASE, POWERRAIL BASE, SPEEDPLATE PLUS 13, ULTRAFLEX PLATE 9, POWER PLATE 9, LITERAIL M

EARLIER LINES

CARVE PLATE 13 SLR, CARVE PLATE 9 SLR, JUNIOR RACE PLATE 11, HEAD PLATE 14, RAILFLEX BASE 07, RAILFLEX BASE 06, RAILFLEX LITE BASE

TYROLIA

LINE 11.12

POWERRAIL PRO BASE, POWERRAIL BASE, SPEEDPLATE PLUS 13, ULTRAFLEX PLATE 9, POWER PLATE 9, LITERAIL M, KID PLATE 7 LONG

EARLIER LINES

CARVE PLATE 13 SLR, JUNIOR RACE PLATE 11, CARVE PLATE 9 SLR, JUNIOR RACE PLATE 14, SUPER RAILFLEX BASE II, RAILFLEX BASE II, RAILFLEX LITE BASE

TYROLIA INSIDE

KESSLER: POWERRAIL PRO BASE, POWERRAIL BASE

DRILL TEMPLATE LITERAIL & KID PLATE (162903)



HEAD

LINE 11.12

LITERAIL L, M, S

TYROLIA

LINE 11.12

LITERAIL L, M, S, KID PLATE 7 LONG, KID PLATE 7 SHORT

TYROLIA INSIDE

SP 2000: LITERAIL L, M, S

DRILL TEMPLATE RACEPLATE 09 (162902)



HEAD

LINE 11.12

RACEPLATE RDX, RACEPLATE JUNIOR

TYROLIA

LINE 11.12

RACEPLATE RDX, RACEPLATE JUNIOR

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



TYROLIA

LINE 11.12

SP 130 ABS DEMO AERO, SP 120 ABS, SP 100 ABS, SP 75 ABS, SP 45

EARLIER LINES

SP 90 ABS, SP 70 ABS

TYROLIA INSIDE

4FRNT: DEADBOLT 13 DEMO

DRILL TEMPLATE SR 2003 W (162762)



TYROLIA

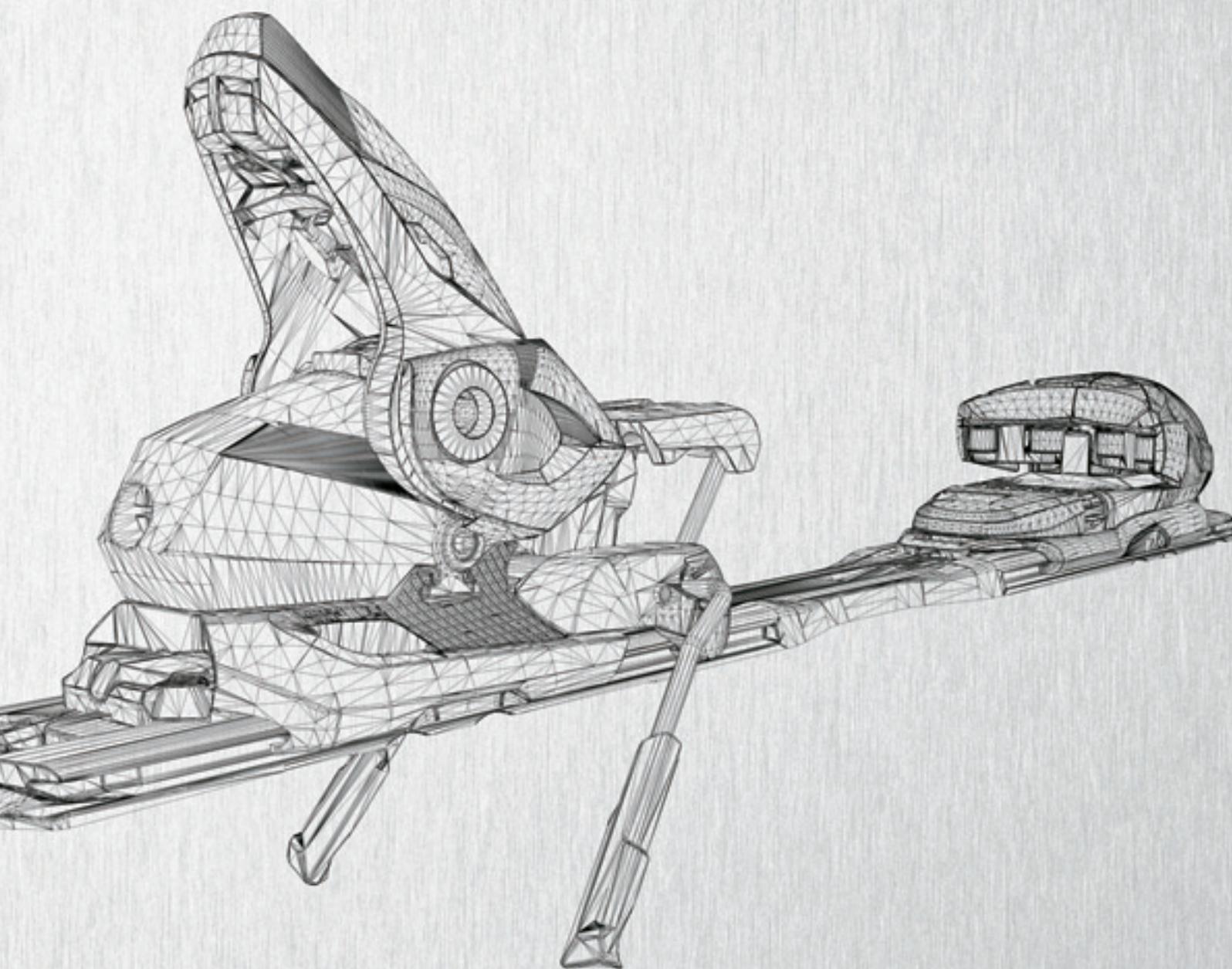
LINE 11.12

SR 100, SRL 100, SR 45

EARLIER LINES

SR 75, SR 70

RETAIL BINDINGS



HEAD BINDING LINE 2011.12

Model	Ramp angle (mm)	Z-DIN	kg	lbs	Weight set	Drill template	Feature			
								Toe type	Toe system	
COMPETITION										
FREEFLEX PRO 20 X RD	5.0	10-20	from 97	from 209	3030 g	92 W / FAT	FREEFLEX PRO	AERO	RACE DIAGONAL	
FREEFLEX PRO 20 X RS	5.0	10-20	from 97	from 209	3030 g	92 W / FAT	FREEFLEX PRO	AERO	RACE DIAGONAL	
FREEFLEX PRO 18 X SALE	5.0	8-18	from 79	from 175	3030 g	92 W / FAT	FREEFLEX PRO	AERO	RACE DIAGONAL	
FREEFLEX PRO 16 X RD	5.0	8-16	from 79	from 175	3020 g	92 W / FAT	FREEFLEX PRO	AERO	RACE DIAGONAL	
FREEFLEX PRO 16 X RD STIFF	7.0	8-16	from 79	from 175	3020 g	92 W / FAT	FREEFLEX PRO	AERO	RACE DIAGONAL	
RACING										
FREEFLEX PRO 16	5.0	5-16	from 49	from 109	2680 g	92 W / FAT	FREEFLEX PRO	AERO	RACE DIAGONAL	
FREEFLEX PRO 16 WIDE 88	5.0	5-16	from 49	from 109	2680 g	92 W / FAT	FREEFLEX PRO	AERO	RACE DIAGONAL	
GTO 15	5.0	5-15	from 49	from 109	2760 g	92 W / FAT	—	AERO	RACE DIAGONAL	
FREEFLEX PRO 14	7.0	4-14	from 42	from 92	2330 g	92 W / FAT	FREEFLEX PRO	LX	FULL DIAGONAL	
FREEFLEX PRO 14 WIDE 88	7.0	4-14	from 42	from 92	2330 g	92 W / FAT	FREEFLEX PRO	LX	FULL DIAGONAL	
FREEFLEX PRO 11	7.0	3-11	from 31	from 67	2260 g	92 W / FAT	FREEFLEX PRO	LX	FULL DIAGONAL	
FREEFLEX PRO 11 WIDE 88	7.0	3-11	from 31	from 67	2260 g	92 W / FAT	FREEFLEX PRO	LX	FULL DIAGONAL	
MOJO										
MOJO 18 X w/o brake	5.0	8-18	from 79	from 175	2540 g	92 W / FAT	—	AERO	RACE DIAGONAL	
MOJO 15 WIDE 97	5.0	5-15	from 49	from 109	2290 g	92 W / FAT	—	AERO	RACE DIAGONAL	
MOJO 12 w/o brake	9.0	3.5-12	from 36	from 79	1930 g	92 W / FAT	—	LX	FULL DIAGONAL	
MOJO 12 WIDE 97	9.0	3.5-12	from 36	from 79	1930 g	92 W / FAT	—	LX	FULL DIAGONAL	
MOJO 12 WIDE 88	9.0	3.5-12	from 36	from 79	1930 g	92 W / FAT	—	LX	FULL DIAGONAL	
MOJO 11 WIDE 88	9.0	3-11	from 31	from 67	1670 g	92 W / FAT	—	SX	FULL DIAGONAL	
MOJO 7.5 WIDE 90	9.0	2-7.5	22-84	48-187	1415 g	92 W / FAT	—	SL LITE	FULL DIAGONAL	
SYSTEMS										
PRD 14	5.5	4-14	from 42	from 92	2210 g	BASES & PLATES	POWERRAIL	AERO	RACE DIAGONAL	
PRD 12	5.5	3.5-12	from 36	from 79	2090 g	BASES & PLATES	POWERRAIL	LX	FULL DIAGONAL	
PRD 12 WIDE 88	5.5	3.5-12	from 36	from 79	2090 g	BASES & PLATES	POWERRAIL	LX	FULL DIAGONAL	
PR 11	5.0	3-11	from 31	from 67	1770 g	BASES & PLATES	POWERRAIL	SX	FULL DIAGONAL	
LR 7.5	3.0	2-7.5	22-84	48-187	1510 g	LITERAIL & KID PLATE	LITERAIL	SL LITE	FULL DIAGONAL	
LR 4.5	3.0	0.75-4.5	10-48	22-105	1330 g	LITERAIL & KID PLATE	LITERAIL	SL KID	FULL DIAGONAL	
LIGHT DIAGONAL										
LX 12 WIDE 88	3.5	3.5-12	from 36	from 79	2000 g	92 W / FAT	—	LX	FULL DIAGONAL	
SUPERLIGHT										
SX 10	9.0	3-10	from 31	from 67	1615 g	92 W / FAT	—	SX	FULL DIAGONAL	
WOMEN										
MYA 12 PRD	5.5	3.5-12	from 36	from 79	2090 g	BASES & PLATES	POWERRAIL	LX	FULL DIAGONAL	
MYA 10 PRD	5.0	3-10	from 31	from 67	1770 g	BASES & PLATES	POWERRAIL	SX	FULL DIAGONAL	
MYA 9 LR	3.0	2.5-9	from 26	from 57	1520 g	LITERAIL & KID PLATE	LITERAIL	SL LITE	FULL DIAGONAL	
JUNIOR										
SL 90 ABS JR RACE	3.5	2.5-9	from 26	from 57	1530 g	92 W / FAT	—	SL LITE	FULL DIAGONAL	
SL 75	9.0	2-7.5	22-84	48-187	1415 g	92 W / FAT	—	SL LITE	FULL DIAGONAL	
SL 45	3.7	0.75-4.5	10-48	22-105	1215 g	94 W	—	SL KID	FULL DIAGONAL	

DATASHEET

Toe				Heel					Boot sole	
AFD	Stand height	Length adjustment range (mm)	Heel type	Heel system	Brake type	Stand height	Length adjustment range (mm)	Length (mm)	Standard	
DELIRIN	11.0	—	RACE PRO	STANDARD	PB RACE PRO 16-78	16.0	32	255–375	ADULT	
DELIRIN	11.0	—	RACE PRO	STANDARD	PB RACE PRO 16-78	16.0	32	255–375	ADULT	
TEFLON	12.0	—	RACE PRO	STANDARD	PB RACE PRO 17-78	17.0	32	255–375	ADULT	
DELIRIN	11.0	—	RACE PRO	STANDARD	PB RACE PRO 16-78	16.0	32	255–375	ADULT	
DELIRIN	11.0	—	RACE PRO	STANDARD	PB RACE PRO 18-78	18.0	32	255–375	ADULT	
ABS	14.0	—	RACE PRO	STANDARD	PB RACE PRO 17-78	19.0	32	255–375	ADULT	
ABS	14.0	—	RACE PRO	STANDARD	PB RACE PRO WIDE 88	19.0	32	255–375	ADULT	
TEFLON	24.5	—	RACE PRO	STANDARD	PB RACE PRO 17-78	29.5	32	—	ADULT	
ABS	14.0	—	LD	DIAGONAL	PB LD 78	21.0	24	257–372	ADULT	
ABS	14.0	—	LD	DIAGONAL	PB LD WIDE 88	21.0	24	257–372	ADULT	
ABS	14.0	—	RACE LITE	STANDARD	PB LD 78	21.0	24	257–372	ADULT	
ABS	14.0	—	RACE LITE	STANDARD	PB LD WIDE 88	21.0	24	257–372	ADULT	
TEFLON WIDE	12.0	—	RACE PRO	STANDARD	—	17.0	32	—	ADULT	
TEFLON WIDE	12.0	—	RACE PRO	STANDARD	PB RACE PRO WIDE 97	17.0	32	—	ADULT	
TEFLON WIDE	12.0	—	LD	DIAGONAL	—	21.0	24	—	ADULT	
TEFLON WIDE	12.0	—	LD	DIAGONAL	PB LD WIDE 97	21.0	24	—	ADULT	
TEFLON WIDE	12.0	—	LD	DIAGONAL	PB LD WIDE 88 FR	21.0	24	—	ADULT	
TEFLON WIDE	12.0	—	SX	STANDARD	PB LD WIDE 88 FR	21.0	32 (-8/+24)	—	ADULT	
TEFLON	12.0	—	SL LITE	STANDARD	SL JUNIOR BRAKE WIDE 90	21.0	32 (-8/+24)	—	ADULT	
ABS	28.0	60	LD	DIAGONAL	POWERRAIL BRAKE LD 80	33.5	60	260–380	ADULT	
ABS	28.0	60	LD	DIAGONAL	POWERRAIL BRAKE LD 80	33.5	60	260–380	ADULT	
ABS	28.0	60	LD	DIAGONAL	POWERRAIL BRAKE LD WIDE 88	33.5	60	260–380	ADULT	
AFS	26.0	60	SX	STANDARD	POWERRAIL BRAKE SL 78	31.0	60	260–380	ADULT	
ABS	25.0	40	SL LITE	STANDARD	SL BRAKE LR 78	28.0	40	S 199–283 M 239–323 L 263–347	ADULT	
TEFLON	25.0	40	SL KID	STANDARD	SL KID BRAKE LR 74	28.0	40	S 199–283 M 239–323 L 263–347	A / C	
ABS	17.5	—	LD	DIAGONAL	PB LD WIDE 88	21.0	24	—	ADULT	
TEFLON	12.0	—	SX	STANDARD	SL BRAKE 78	21.0	32 (-8/+24)	—	ADULT	
ABS	28.0	60	LD	DIAGONAL	POWERRAIL BRAKE LD 80	33.5	60	260–380	ADULT	
AFS	26.0	60	SX	STANDARD	POWERRAIL BRAKE SL 78	31.0	60	260–380	ADULT	
ABS	25.0	40	SL LITE	STANDARD	SL BRAKE LR 78	28.0	40	S 199–283 M 239–323 L 263–347	ADULT	
ABS	17.5	—	SL LITE	STANDARD	SL JUNIOR BRAKE 72	21.0	32 (-8/+24)	—	ADULT	
TEFLON	12.0	—	SL LITE	STANDARD	SL JUNIOR BRAKE 72	21.0	32 (-8/+24)	—	ADULT	
TEFLON	11.3	—	SL KID	STANDARD	SL KID BRAKE 74	15.0	44	—	A / C	

A / C = ADULT/CHILDREN

TYROLIA BINDING LINE 2011.12

Model	Ramp angle (mm)	Z-DIN	kg	lbs	Weight set	Drill template	Feature			
								Toe type	Toe system	
RACING										
FREEFLEX PRO 17	5.0	6-17	from 49	from 109	2660 g	92 W / FAT	FREEFLEX PRO	AERO	RACE DIAGONAL	
FREEFLEX PRO 14	7.0	4-14	from 42	from 92	2460 g	92 W / FAT	FREEFLEX PRO	LD	FULL DIAGONAL	
FREEFLEX PRO 11	7.0	3-11	from 31	from 67	2260 g	92 W / FAT	FREEFLEX PRO	SX	FULL DIAGONAL	
PEAK										
PEAK 18 X T.H. w/o brake	5.0	8-18	from 79	from 175	2540 g	92 W / FAT	—	AERO	RACE DIAGONAL	
PEAK 15 T.H. w/o brake	5.0	5-15	from 49	from 109	2290 g	92 W / FAT	—	AERO	RACE DIAGONAL	
PEAK 15 w/o brake	5.0	5-15	from 49	from 109	2290 g	92 W / FAT	—	AERO	RACE DIAGONAL	
PEAK 15 WIDE 97	5.0	5-15	from 49	from 109	2290 g	92 W / FAT	—	AERO	RACE DIAGONAL	
PEAK 12 w/o brake	9.0	3.5-12	from 36	from 79	2120 g	92 W / FAT	—	LD	FULL DIAGONAL	
PEAK 12 WIDE 97	9.0	3.5-12	from 36	from 79	2120 g	92 W / FAT	—	LD	FULL DIAGONAL	
PEAK 11 WIDE 90	9.0	3-11	from 31	from 67	1620 g	92 W / FAT	—	SX	FULL DIAGONAL	
PEAK 11 FAT 115	9.0	3-11	from 31	from 67	1620 g	92 W / FAT	—	SX	FULL DIAGONAL	
PEAK 7.0 AC WIDE 90	9.0	2-7	22-78	48-174	1420 g	92 W / FAT	—	SL JUNIOR	FULL DIAGONAL	
SYSTEMS										
POWER 12 D	5.5	3.5-12	from 36	from 79	2210 g	BASES & PLATES	POWERRAIL	LD	FULL DIAGONAL	
POWER 11 D	5.5	3-11	from 31	from 67	2040 g	BASES & PLATES	POWERRAIL	SL	RACE DIAGONAL	
POWER 11 D WIDE 88	5.5	3-11	from 31	from 67	2040 g	BASES & PLATES	POWERRAIL	SL	FULL DIAGONAL	
PR 10	5.0	3-10	from 31	from 67	1770 g	BASES & PLATES	POWERRAIL	SX	FULL DIAGONAL	
LR 10	3.0	3-10	from 31	from 67	1580 g	LITERAIL & KID PLATE	LITERAIL	SL	FULL DIAGONAL	
LR 9	3.0	2.5-9	from 26	from 57	1520 g	LITERAIL & KID PLATE	LITERAIL	SL LITE	FULL DIAGONAL	
LR 9 WIDE 90	3.0	2.5-9	from 26	from 57	1520 g	LITERAIL & KID PLATE	LITERAIL	SL LITE	FULL DIAGONAL	
LR 7.0 AC	3.0	2-7	22-78	48-174	1510 g	LITERAIL & KID PLATE	LITERAIL	SL JUNIOR	FULL DIAGONAL	
LR 7.0 AC WIDE 90	3.0	2-7	22-78	48-174	1510 g	LITERAIL & KID PLATE	LITERAIL	SL JUNIOR	FULL DIAGONAL	
LR 4.5	3.0	0.75-4.5	10-48	22-105	1330 g	LITERAIL & KID PLATE	LITERAIL	SL KID	FULL DIAGONAL	
LIGHT DIAGONAL										
LD 12	3.5	3.5-12	from 36	from 79	2120 g	92 W / FAT	—	LD	FULL DIAGONAL	
SUPERLIGHT										
SX 10	9.0	3-10	from 31	from 67	1615 g	92 W / FAT	—	SX	FULL DIAGONAL	
JUNIOR										
SL 70 AC	9.0	2-7	22-78	48-174	1400 g	92 W / FAT	—	SL JUNIOR	FULL DIAGONAL	
SL 45	3.7	0.75-4.5	10-48	22-105	1210 g	94 W	—	SL KID	FULL DIAGONAL	
PROMO										
POWER 11 PROMO	3.0	3-11	from 31	from 67	1840g	BASES & PLATES	POWERRAIL	SL	FULL DIAGONAL	
SL 100	9.0	3-10	from 31	from 67	1570 g	92 W / FAT	—	SL	FULL DIAGONAL	

DATASHEET

Toe				Heel					Boot sole	
AFD	Stand height	Length adjustment range (mm)	Heel type	Heel system	Brake type	Stand height	Length adjustment range (mm)	Length (mm)	Standard	
ABS	14.0	—	RACE PRO	STANDARD	PB RACE PRO 17-78	19.0	32	255–375	ADULT	
ABS	14.0	—	LD	DIAGONAL	PB LD 78	21.0	24	257–372	ADULT	
ABS	14.0	—	RACE LITE	STANDARD	PB LD 78	21.0	24	257–372	ADULT	
TEFLON WIDE	12.0	—	RACE PRO	STANDARD	—	17.0	32	—	ADULT	
TEFLON WIDE	12.0	—	RACE PRO	STANDARD	—	17.0	32	—	ADULT	
TEFLON WIDE	12.0	—	RACE PRO	STANDARD	—	17.0	32	—	ADULT	
TEFLON WIDE	12.0	—	RACE PRO	STANDARD	PB RACE PRO WIDE 97	17.0	32	—	ADULT	
TEFLON WIDE	12.0	—	LD	DIAGONAL	—	21.0	24	—	ADULT	
TEFLON WIDE	12.0	—	LD	DIAGONAL	PB LD WIDE 97	21.0	24	—	ADULT	
TEFLON WIDE	12.0	—	SX	STANDARD	SL BRAKE WIDE 90	21.0	32 (-8/+24)	—	ADULT	
TEFLON WIDE	12.0	—	SX	STANDARD	SL BRAKE FAT 115	21.0	32 (-8/+24)	—	ADULT	
TEFLON	12.0	—	SL JUNIOR	STANDARD	SL JUNIOR BRAKE WIDE 90	21.0	32 (-8/+24)	—	A / C	
ABS	28.0	60	LD	DIAGONAL	POWERRAIL BRAKE LD 80	33.5	60	260–380	ADULT	
ABS	28.0	60	LD	DIAGONAL	POWERRAIL BRAKE LD 80	33.5	60	260–380	ADULT	
ABS	28.0	60	LD	DIAGONAL	POWERRAIL BRAKE LD WIDE 88	33.5	60	260–380	ADULT	
AFS	26.0	60	SX	STANDARD	POWERRAIL BRAKE SL 78	31.0	60	260–380	ADULT	
ABS	25.0	40	SL LITE	STANDARD	SL BRAKE LR 78	28.0	40	S 199–283 M 239–323 L 263–347	ADULT	
ABS	25.0	40	SL LITE	STANDARD	SL BRAKE LR 78	28.0	40	S 199–283 M 239–323 L 263–347	ADULT	
ABS	25.0	40	SL LITE	STANDARD	SL BRAKE LR WIDE 90	28.0	40	S 199–283 M 239–323 L 263–347	ADULT	
ABS	25.0	40	SL JUNIOR	STANDARD	SL BRAKE LR 78	28.0	40	S 199–283 M 239–323 L 263–347	A / C	
ABS	25.0	40	SL JUNIOR	STANDARD	SL BRAKE LR WIDE 90	28.0	40	S 199–283 M 239–323 L 263–347	A / C	
TEFLON	25.0	40	SL KID	STANDARD	SL KID BRAKE LR 74	28.0	40	S 199–283 M 239–323 L 263–347	A / C	
ABS	17.5	—	LD	DIAGONAL	PB LD 78	21.0	24	—	ADULT	
TEFLON	12.0	—	SX	STANDARD	SL BRAKE 78	21.0	32 (-8/+24)	—	ADULT	
TEFLON	12.0	—	SL JUNIOR	STANDARD	SL JUNIOR BRAKE 72	21.0	32 (-8/+24)	—	A / C	
TEFLON	11.3	—	SL KID	STANDARD	SL KID BRAKE 74	15.0	44	—	A / C	
ABS	28.0	60	SL	STANDARD	POWERRAIL BRAKE SL 78	31.0	60	260–380	ADULT	
TEFLON	12.0	—	SL	STANDARD	SL BRAKE 78	21.0	32 (-8/+24)	—	ADULT	

A / C = ADULT/CHILDREN

PARTS-REFERENCE CHART RETAIL



TOE PIECE

- 1 Adjustment screw
- 2 Visual indicator
- 3 ABS
- 4 AFS
- 5 AFD-Teflon
- 6 Toe cover
- 7 Stand height adjustment (A/C boots)
- 8 Wings

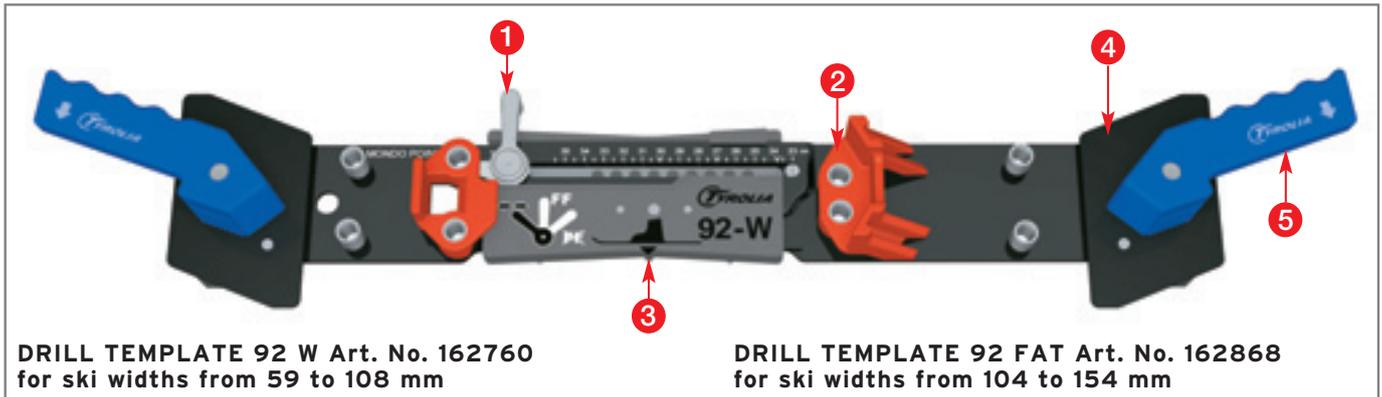
HEEL PIECE

- 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 POWERRAIL lever
- 19 POWERRAIL scale
- 20 LITERAIL lever
- 21 LITERAIL scale

DRILL TEMPLATE 92 W & 92 FAT



DRILL TEMPLATE 92 W Art. No. 162760
for ski widths from 59 to 108 mm

DRILL TEMPLATE 92 FAT Art. No. 162868
for ski widths from 104 to 154 mm

1. COMPATIBILITY

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

HEAD	
FREEFLEX PRO 20 X RD	MOJO 15 WIDE 97
FREEFLEX PRO 20 X RS	MOJO 12
FREEFLEX PRO 18 X Sale	MOJO 12 WIDE 97
FREEFLEX PRO 16 X RD	MOJO 12 WIDE 88
FREEFLEX PRO 16	MOJO 11 WIDE 88
FREEFLEX PRO 16 WIDE 88	MOJO 7.5 WIDE 90
FREEFLEX PRO 14	LX 12 WIDE 88
FREEFLEX PRO 14 WIDE 88	LX 12 WIDE 88
FREEFLEX PRO 11	SX 10
FREEFLEX PRO 11 WIDE 88	SL 90 ABS JR RACE
GTO 15	SL 75
MOJO 18 X	

TYROLIA	
FREEFLEX PRO 17	PEAK 12 WIDE 97
FREEFLEX PRO 14	PEAK 11 WIDE 90
FREEFLEX PRO 11	PEAK 11 FAT 115
PEAK 18 X T.H.	PEAK 7.0 AC WIDE 90
PEAK 15 X T.H.	LD 12
PEAK 15	SX 10
PEAK 15 WIDE 97	SL 100
PEAK 12	SL 70 AC

All HEAD/TYROLIA adult bindings come with screws with a penetration depth of 8 mm for skis, group G1 & G2. 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 (see screw chart in this manual-page 60/61).

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: HEAD/TYROLIA offers different types of brakes. Refer to the brake overview on 56-59 for brake and binding compatibility.

The Description of the brakes always includes a number like 72, 78, 90, 97, 115, and so on This number stands for the maximum ski width in the brake area and not in the ski center!!!

2. ADJUSTING THE DRILL TEMPLATE

There are two different mounting procedures for template 92. One for FREEFLEX PRO and one for TWO-PIECE bindings.

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

FREEFLEX 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 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, 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 9.0 mm 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 HEAD/TYROLIA glue in each hole. It lubricates the screws and seals the holes (pict 1).

pict 1



5. MOUNTING

5.1 FOR FREEFLEX PRO

Place the pre-assembled heel over the prepared holes (pict 2) and tighten the screws in a cross pattern (pict 3).

pict 2

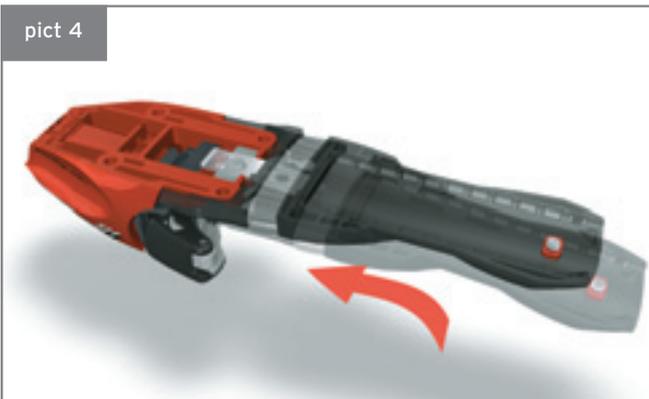


pict 3



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

pict 4



pict 5



Then you have to place the pre-assembled toe over the holes.

pict 6



ATTENTION: First you have to tighten the screw in the center - the number has to correspond to the centimetre mark from the template.

pict 7



To fix it you have to hold the bands together and tighten the screw carefully.

pict 8



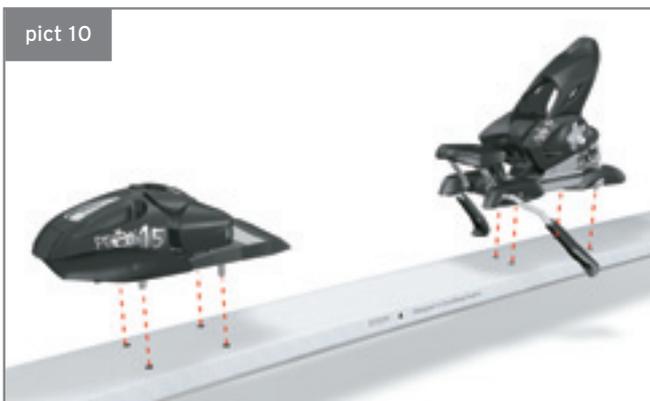
After this align the toe over the holes and fasten the screws.



pict 9

5.2 FOR TWO-PIECE BINDINGS

Place the binding over the predrilled holes and tighten the screws.



pict 10

6. FORWARD PRESSURE

Check to make sure 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 scribed area (pict 11) 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 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 scribed area (pict 11).



pict 11

7. JUNIOR BINDINGS

7.1 ADJUSTING THE TOE UNIT - SL 70 AC

The SL 70 AC is a binding suitable for both ski boots type A-adult and C-children.

The toe sole lug of the SL 70 AC is pre-adjusted for ski boots type A-adult. If ski boots type C-children are used, use a screwdriver to push the wedge down under the toe unit up to the stop (pict 12).



pict 12

To readjust the toe for ski boots type A-adult push the wedge back to its original position (pict 13).



pict 13

7.2 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 can we guarantee the right pullout strength (see screw overview page 60/61).

8. ADJUSTING THE RELEASE VALUES

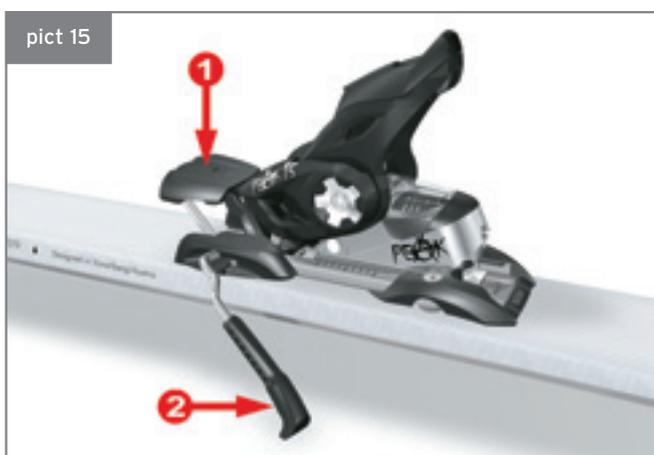
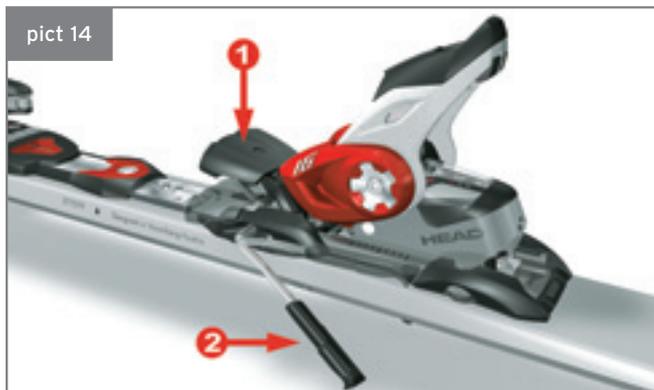
The release values of the toe and heel should be determined by height and body weight (ISO/ASTM) method. Set the binding accordingly with the adjustment screws. We recommend the use of a calibrated testing device and that you keep a written record of whether the system passes or fails (requirement in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

NOTE: Release/retention settings above a release moment of 100 NM at the toe and 400 NM at the heel are higher than the international standards recommend and are used solely at the skier's own risk!

9. 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 (pict 14 and 15).



The brake arms (2) must automatically return to the braking position when the pedal is released.

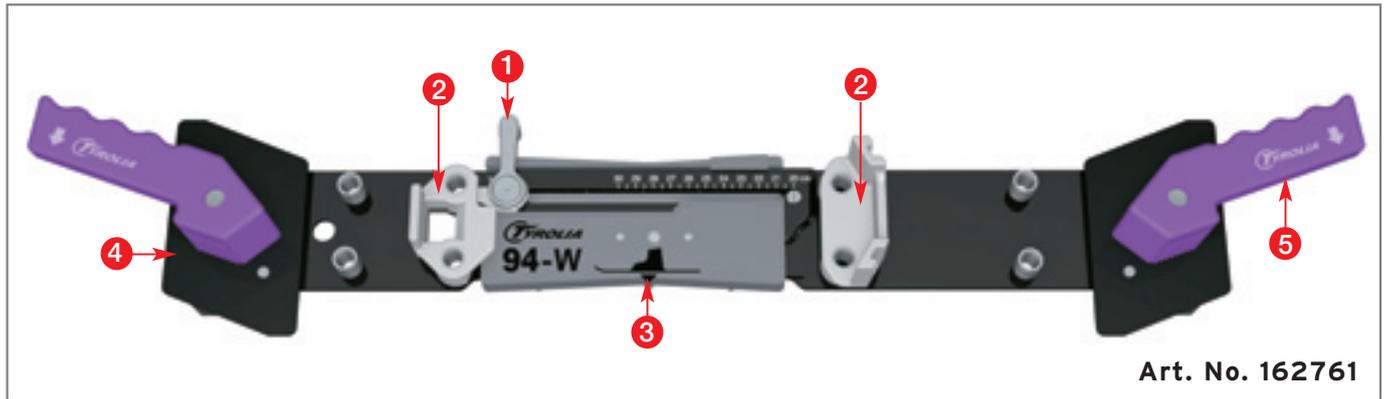
LATERAL ELASTICITY OF THE TOE

Press the boot laterally outward. The binding must re-center the boot easily and quickly from a 15 mm lateral displacement (junior bindings - 10 mm).

10. 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 94 W



Art. No. 162761

1. COMPATIBILITY

Presently the drill template 94 W can be used for:

HEAD
SL 45

TYROLIA
SL 45

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 SL 45 binding comes with 6 mm penetration depth screws and thus could be used for skis, group G3 & G4. The standard brake, the SL KID BRAKE 74 (Art. no. 162399), can be used for skis up to 74 mm, for wider skis use the SL KID BRAKE wide 84 (Art. no. 162658), which is for skis from 74 mm to 84 mm.

NOTE: HEAD/TYROLIA offers different types of brakes. Refer to the brake overview on page 56-59 for brake and binding compatibility.

The description of the brakes always includes a number like 74 or 84. This number stands for the maximum ski width in the brake area and not in the ski center!!!

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 TYROLIA drill. If required by the ski manufacturer, tap the hole.

Place a drop of TYROLIA glue into the holes. It lubricates the screws and seals the ski (pict 16).



pict 16

5. MOUNTING

Place toe unit over the holes and fasten the screws in an X-pattern. Then do the same for the heel (pict 17).



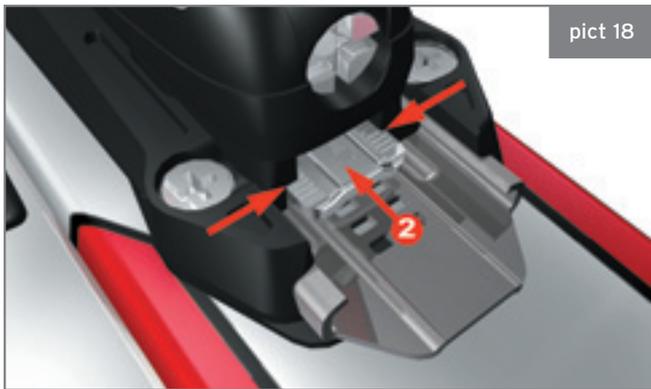
pict 17

6. FORWARD PRESSURE

Place the boot in the binding and close it. The indicating pointer should rest within the scribed area (pict 18), 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 (2) 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 scribed area (pict 18).



pict 18

7. ADJUSTMENT

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



pict 19

ADJUSTING THE TOE UNIT

The toe sole lug is pre-adjusted for ski boots type C-children. If ski boots type A-adult are used, use a screwdriver to push the wedge forward up to the stop from the left hand side (pict 20).



pict 20

Use a screwdriver to return the wedge to the type C-children position (pict 21).



pict 21

ADJUSTING 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).

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 22).



pict 22

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 BASES & PLATES



Art. No. 162865

1. COMPATIBILITY

Presently the drill template BASES & PLATES can be used for:

HEAD

SPEEDPLATE PLUS 13
POWER PLATE 9
ULTRAFLEX PLATE 9
POWERRAIL PRO BASE
POWERRAIL BASE
LITERAIL M

TYROLIA

SPEEDPLATE PLUS 13
POWER PLATE 9
ULTRAFLEX PLATE 9
POWERRAIL PRO BASE
POWERRAIL BASE
LITERAIL M
KID PLATE 7 LONG

Drill template BASES & PLATES is for mounting of all types of plates and bases, except the RACEPLATES, LITERAIL (S, L) and the KID PLATE 7 short. All bases and plates come with 8 mm penetration depth screws, except the RACEPLATE Junior, which comes with 6 mm penetration depth screws (for spare screws see chart on page 60/61). For the LITERAIL bases and KID PLATE 7 long the right screw set has to be ordered 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.

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.

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 7.0 mm drill bit.

DRILL THROUGH THE APPROPRIATE BUSHINGS

Model	Color of indicator
Carve Plate 13 Carve Plate 9 Junior Race Plate	yellow
Speedplate Plus 13 Power Plate 9 Ultraflex Plate 9	red
Literail M Kid Plate 7 Long Railflex Lite Base	black
PowerRail Base PowerRail Pro Base Railflex Base	white (silver)

After drilling place a drop of TYROLIA glue into the holes. It lubricates the screws and seals the holes (pict 23).



pict 23

4. PLATES

4.1 MOUNTING - PLATES

The compatible binding-plate combinations can be found in the compatibility chart (see page 28).

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.



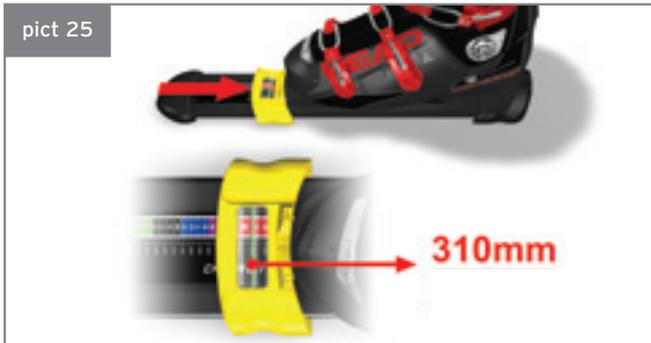
pict 24

4.2 MOUNTING - BINDINGS ON PLATES

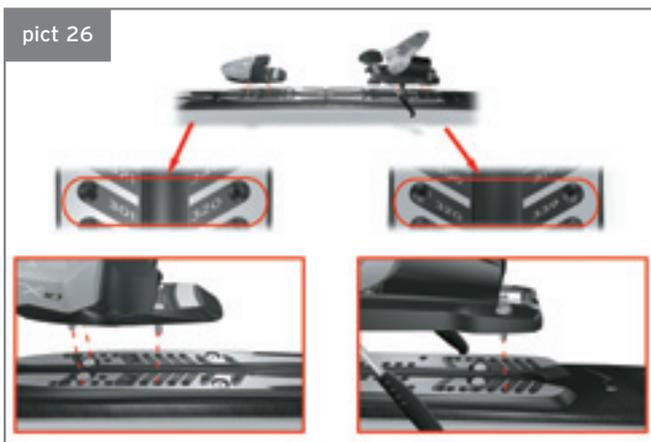
For mounting junior bindings on HEAD/TYROLIA PLATES, you have to replace the pre-mounted screws by screws of 8 mm penetration depth. The right pullout strength can only be ensured with these screws (see page 60/61).

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 HEAD/TYROLIA 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.



NOTE: MOUNTING HEAD/TYROLIA BINDINGS ON RAISED PLATFORMS:

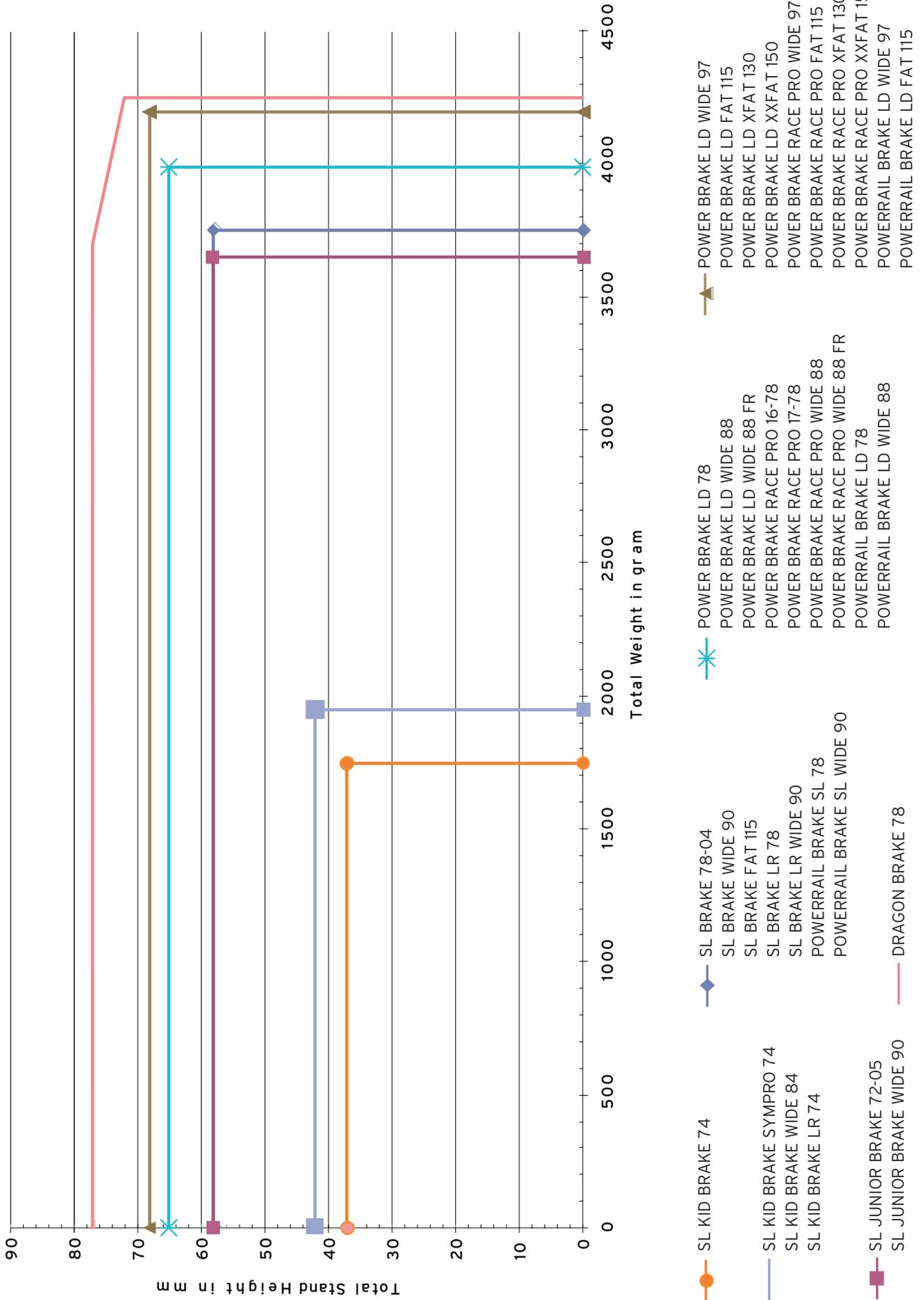
- Replacing the POWER BRAKE is not necessary when you mount HEAD/TYROLIA bindings with the HEAD/TYROLIA SPEEDPLATE PLUS 13, POWER PLATE 9, RACEPLATE RDX, RACEPLATE Junior or ULTRAFLEX PLATE 9 on skis which do not have integrated platforms. But for other combinations you might need the HEAD/TYROLIA Dragon Brake, which has extended brake arms and increased braking power.

If you use HEAD/TYROLIA bindings on plates from other manufactures, check the HEAD/TYROLIA brake matrix (see graphic 4.3, page 27) to check if the desired combination of ski-plate-binding is possible or if you need to exchange the brake.

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. Using the list below, determine which HEAD/TYROLIA brakes are standard on the bindings delivered.
4. Find the value on the vertical axis which corresponds to the sum of the addition for the stand height.
5. 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.
6. If the point of intersection of the weight and stand height lies below the respective curve, the brake will function properly.
7. If the point of intersection lies above the curve for the POWER BRAKE, the brake must be replaced with the next stronger one.
8. If the point of intersection lies above the curve for the DRAGON BRAKE, using 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 HEAD/TYROLIA binding with less stand height (see pages 14-17).
 - b) Reduce the total weight to
 - a lighter plate, e. g. a HEAD/TYROLIA POWER PLATE 9
 - a HEAD/TYROLIA binding with less weight,
 - a lighter ski.
 - c) Use a combination of a) + b).

4.3 HEAD/TYROLIA BRAKE MATRIX 2011.12



4.4 HEAD/TYROLIA BINDING-PLATE COORDINATION LINE 2011.12

	SPEEDPLATE PLUS 13	POWER PLATE 9	ULTRAFLEX PLATE 9	RACEPLATE JUNIOR
<i>Height:</i>	13 mm	9 mm	9 mm	11.5 mm
<i>Mounting range:</i>	258-372 mm	258-372 mm	258-372 mm	238-342 mm
<i>Mounting range (SL):</i>	261-363 mm	261-363 mm	261-363 mm	241-354 mm
BINDING	STAND HEIGHT (mm)			
FREEFLEX PRO 18 (X) MOJO 18 X MOJO 15	30,0	26,0	26,0	28,5
FREEFLEX PRO 16	32,0	28,0	28,0	30,5
FREEFLEX PRO 14 FREEFLEX PRO 11 MOJO 12 MOJO 11 MOJO 7.5 LX 12 SX 10 SL 90 ABS JR RACE SL 75	34,0	30,0	30,0	32,5
SL 45	—	—	—	—
PEAK 18 X PEAK 15	30,0	26,0	26,0	28,5
FREEFLEX PRO 17	32,0	28,0	28,0	30,5
FREEFLEX PRO 14 FREEFLEX PRO 11 PEAK 12 PEAK 11 PEAK 7.0 AC LD 12 SX 10 SL 100 SL 70 AC	34,0	30,0	30,0	32,5
SP 130 ABS DEMO AERO SP 120 ABS SP 100 ABS	44,5	40,5	40,5	—
SP 75 ABS	44,5	40,5	40,5	—
SR 100 SRL 100	—	31,5	—	—
SL 45 SP 45 SR 45	—	—	—	—

 non compatible

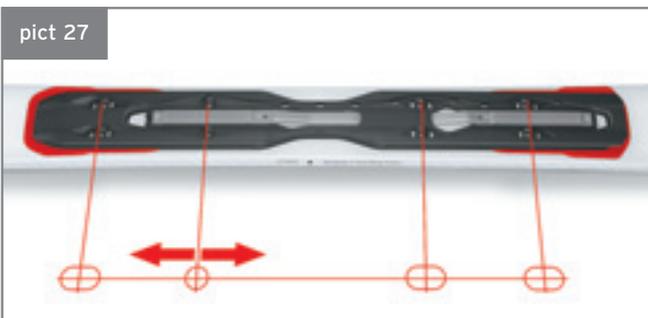
5. POWERRAIL SYSTEM

The POWERRAIL system meets the demands of adult skiers, while being perfectly suited for both retail and rental sectors! HEAD/TYROLIA offers two types of bases, the POWERRAIL base and the POWERRAIL PRO base, which are suited for boot sole length of 260 all the way up to 380 mm. All POWERRAIL bindings can be combined with both types of bases.

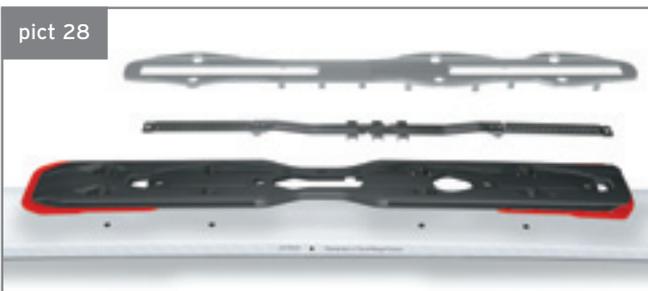
HEAD POWERRAIL & POWERRAIL PRO BASE	
PRD 14	PRD 12 WIDE 88
PRD 12	PR 11

TYROLIA POWERRAIL & POWERRAIL PRO BASE	
POWER 12 D	POWER 11 D WIDE 88
POWER 11 D	PR 10

The standard base POWERRAIL consists of a monoblock base body and a cover with an inlaid toothed area. The cover can be colour matched to the ski design. For unhindered natural ski flex, the base is secured by one fixed pair of screws, and three free-gliding pairs of screws (pict 27). This ensures the base safely adapts to the flex of the ski.



The high-end variant, POWERRAIL Pro, is equipped with an additional freeflex band which links both toothed areas at the toe and the heel side of the base. Therefore, toe and heel piece can glide on the base unhindered. This additional "Double Freeflex Function" provides fewer impediments of the natural ski flex, constant release values and better edge grip.



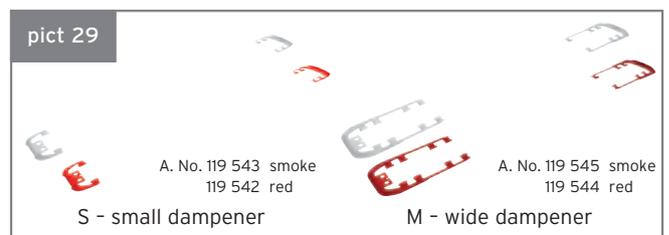
NOTE: HEAD/TYROLIA offers different types of brakes for POWERRAIL bindings. Refer to the brake overview on page 56-59 for brake and binding compatibility.

The Description of the brakes always includes a number like 78, 90, 97, 115, and so on This number stands for the maximum ski width in the brake area and not in the ski center!!!

5.1 DAMPENERS

For even more flexibility and optimal fit, both PowerRail and PowerRail Pro bases can be mounted with additional dampeners:

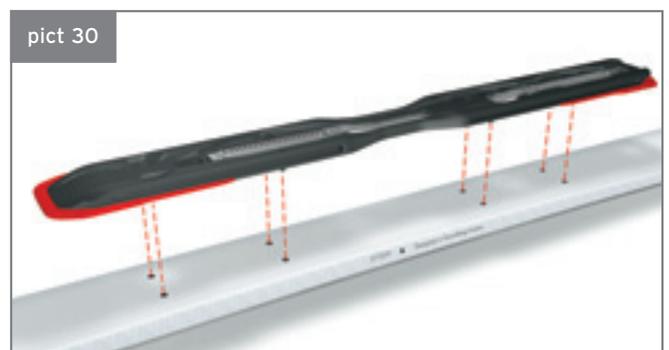
- small dampener for ski width from 64 mm onwards
- wide dampener for ski width from 74 mm onwards



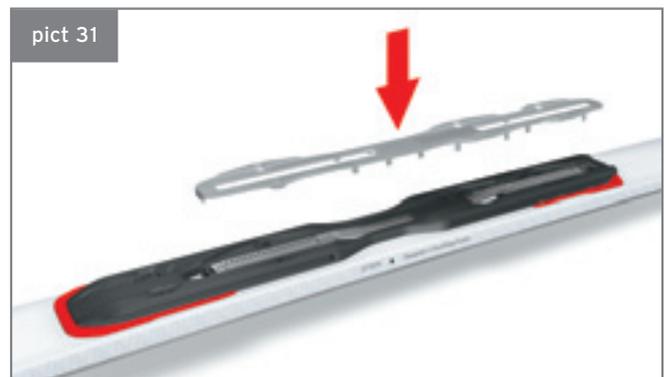
5.2 MOUNTING - BASE

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 25: the white mark and the silver bushings for POWERRAIL.

The procedure is similar as for plates - just follow the instructions on page 25. After drilling, cleaning, tapping and lubricating you can put on the base. Place it over the holes and tighten all screws (pict 30).



Finally you can snap in the appropriate cover (pict 31).



5.3 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 HEAD/TYROLIA rental caliper (Art. no. 162617).



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.



Now hook the brake into the heel housing.



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.



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 - and you are ready to go.



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.



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.

5.4 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 63).

6. 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 100 NM at the toe and 400 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 (see pict 38).



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?

DRILL TEMPLATE LITERAIL & KID PLATE



Art. No. 162903

1. COMPATIBILITY

Presently the drill template LITERAIL and KID PLATE 7 can be used for:

HEAD
LITERAIL S
LITERAIL M
LITERAIL L

TYROLIA
LITERAIL S
LITERAIL M
LITERAIL L
KID PLATE 7 SHORT
KID PLATE 7 LONG

Drill template LITERAIL & KID PLATE can be used for ski widths from 59 to 108 mm to mount LITERAIL Bases and KID PLATE 7. For other skis use the template adapter set (Art. no. 162569). With this adapter set ski widths from 45 mm to 132 mm can be mounted.

Due to three different mid parts, LITERAIL covers a boot sole range of 199 mm to 347 mm.

Version	Boot sole range
LITERAIL S	199 - 283 mm
LITERAIL M	239 - 323 mm
LITERAIL L	263 - 347 mm

Version	Boot sole range
KID PLATE 7 SHORT	171 - 274 mm
KID PLATE 7 LONG	211 - 314 mm

Depending on the ski specification the appropriate screw set for the LITERAIL base and KID PLATE 7 has to be ordered.

2. POSITIONING THE 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) 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 use for all bases a 4.1 Ø x 9.0 mm drill bit for skis group G1 & G2. For skis of, groups G3 & G4, use a 4.1 Ø x 7.0 mm drill bit.

The front holes are identical for all versions. You just have to align the ski mid mark with the right indicator and use the appropriate bushings for the rear holes.

Version	Color of indicator / bushings
LITERAIL S 199 - 283 mm	yellow
LITERAIL M 239 - 323 mm	red
LITERAIL L 263 - 347 mm	black

Version	Color of indicator / bushings
KID PLATE 7 SHORT 171 - 274 mm	yellow
KID PLATE 7 LONG 211 - 314 mm	red

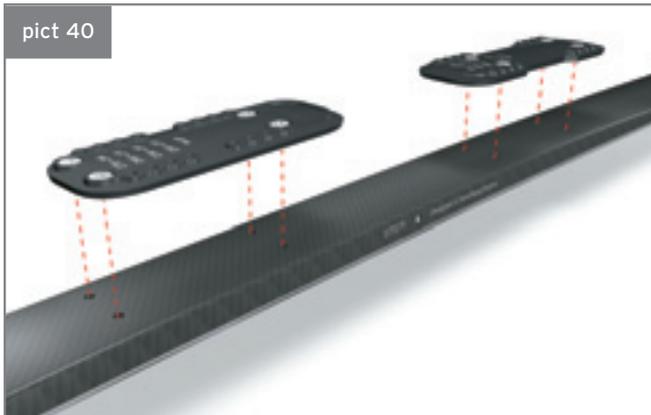
After drilling place a drop of TYROLIA glue into the holes. It lubricates the screws and seals the holes (pict 39).



4. KID PLATE 7

4.1 MOUNTING - KID PLATE 7

Place the front and rear part over the holes and tighten the screws carefully (pict 40)



4.2 MOUNTING - BINDINGS

The new KID PLATE 7 provides additional stand height of 7 mm for SL 45 bindings only!

NOTE: Use only the pre-drilled holes for installation of SL 45 bindings on the KID PLATE 7 - do not drill holes into the plate to mount bindings of other manufacturers.

Determine the boots sole length with the HEAD/TYROLIA Rental Boot Caliper and place the binding on the plate corresponding to the appropriate length markings. Tighten the screws.

5. LITERAIL

5.1 MOUNTING - LITERAIL BASES

Place the assembly front part - mid part - rear part over the holes and tighten the screws carefully (pict 41).



5.2 MOUNTING - BINDINGS

Mounting and adjusting the LR 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 HEAD/TYROLIA rental caliper (Art. no. 162617).

pict 42



First you have to open the toe-lever and slide the toe on the rail from the front (pict 43).

pict 43



Lock at the appropriate boot sole length and close the lever (pict 44).

pict 44



Now hook the brake into the heel housing (pict 45).

pict 45



Then you can open the lever and slide the heel on the rail from the back! (pict 46).



Simply lock it at the appropriate boot sole marking by closing the lever - and you are ready to go (pict 47).



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 48).



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 49). Then check the forward pressure again. Now it should be okay.



6. ADJUSTING THE TOE UNIT

6.1 ADJUSTING THE TOE UNIT AT LR 7.0 AC

The LR 7.0 AC is a junior binding, which is for both ski boots type A-adult and ski boots type C-children. The toe sole lug of the LR 7.0 AC is **pre-adjusted for ski boots type A-adult**. If ski boots type C-children are used, use a screwdriver to push the wedge down under the toe unit up to the stop from the left hand side (pict 50).



To readjust the toe for ski boots type A-adult push the wedge back to its original position (pict 51).



6.2 ADJUSTING THE TOE UNIT AT LR 4.5

The toe sole lug at the LR 4.5 is **pre-adjusted for ski boots type C-children**. If ski boots type A-adult are used, use a screwdriver to push the wedge forward up to the stop from the left hand side (pict 52).



pict 52

Use a screwdriver to return the wedge to the type C-children position (pict 53).



pict 53

7. 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 100 NM at the toe and 400 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 (pict 54).



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 (LR 7.0 AC, LR 4.5 - 10 mm).

9. 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?

DRILL TEMPLATE RACEPLATE 09



Art. No. 162902

1. COMPATIBILITY

Presently the drill template RACEPLATE 09 can be used for:

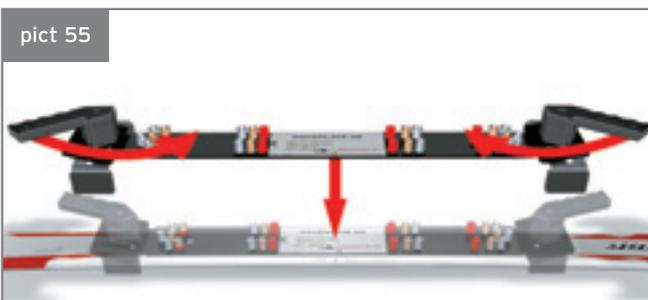
HEAD
RACEPLATE RDX
RACEPLATE JUNIOR

TYROLIA
RACEPLATE RDX
RACEPLATE JUNIOR

Drill template RACEPLATE 09 is for mounting of both 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.

2. POSITIONING THE 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) 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 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 (for spare screws see chart on page 60/61).

DRILL THROUGH THE APPROPRIATE BUSHINGS

Boot sole length	Color of indicator
RACEPLATE RDX: 260 - 320 mm	gold
RACEPLATE RDX: 290 - 350 mm	silver
RACEPLATE JUNIOR	red

After drilling place a drop of TYROLIA glue into the holes. It lubricates the screws and seals the holes (pict 56).



4. MOUNTING - RACEPLATE RDX

4.1 MOUNTING - PLATE

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



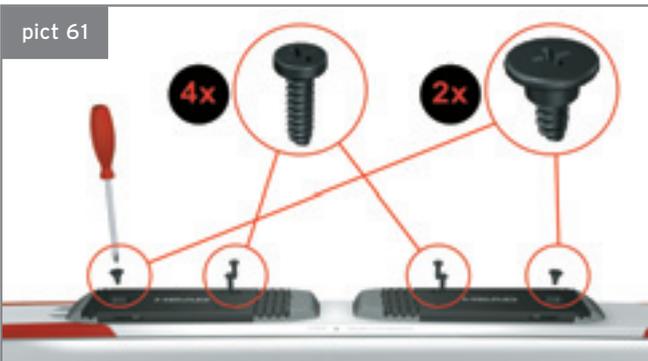
Place a washer also on the outer center hole.



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.

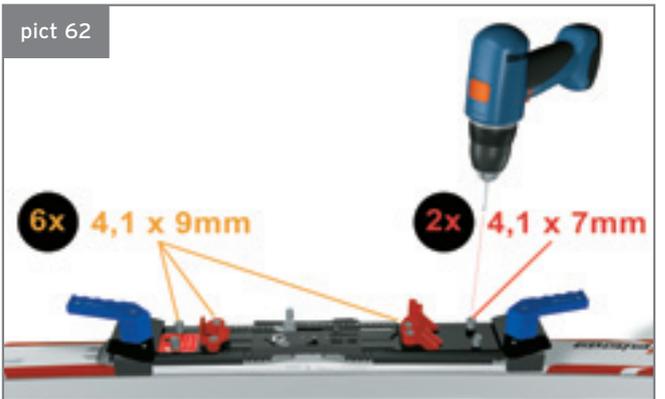


4.2 MOUNTING - BINDING ON RACEPLATE RDX

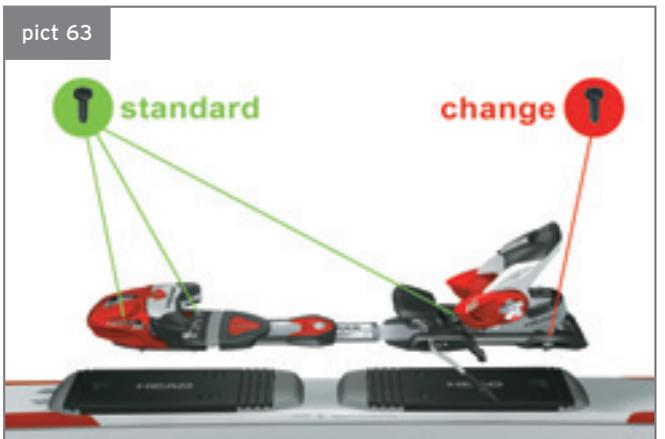
Presently the RACEPLATE RDX is designed for FREEFLEX PRO bindings. We guarantee the right pullout strength only for these models. Mount the binding in accordance with the procedures in this manual with following exceptions.



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.



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



Other than those two points, the mounting is similar to the method described in this manual!

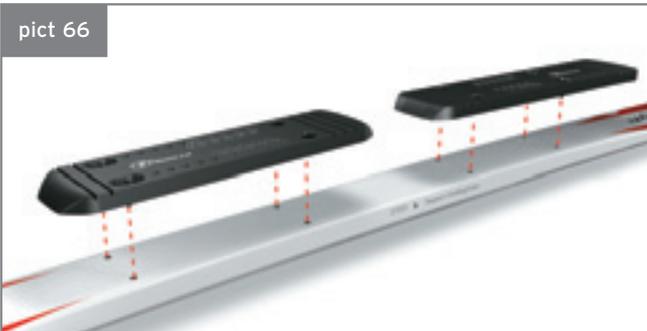


5. MOUNTING - RACEPLATE JUNIOR

5.1 MOUNTING - PLATE

The compatible binding-plate combinations can be found in the compatibility chart (see page 28).

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.



5.2 MOUNTING - BINDINGS ON RACEPLATE JUNIOR

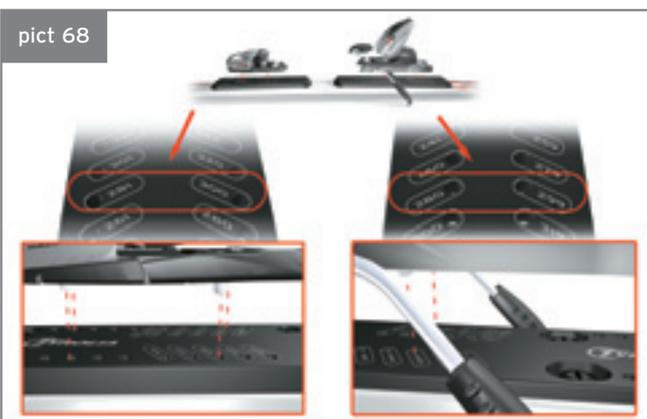
For mounting junior bindings on HEAD/TYROLIA PLATES you have to replace the pre-mounted screws by screws with 8 mm penetration depth. Only with these screws can we guarantee the right pullout strength (see page 60/61).

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 HEAD/TYROLIA Rental boot caliper and place the binding on the Plate corresponding to the appropriate printed length markings.



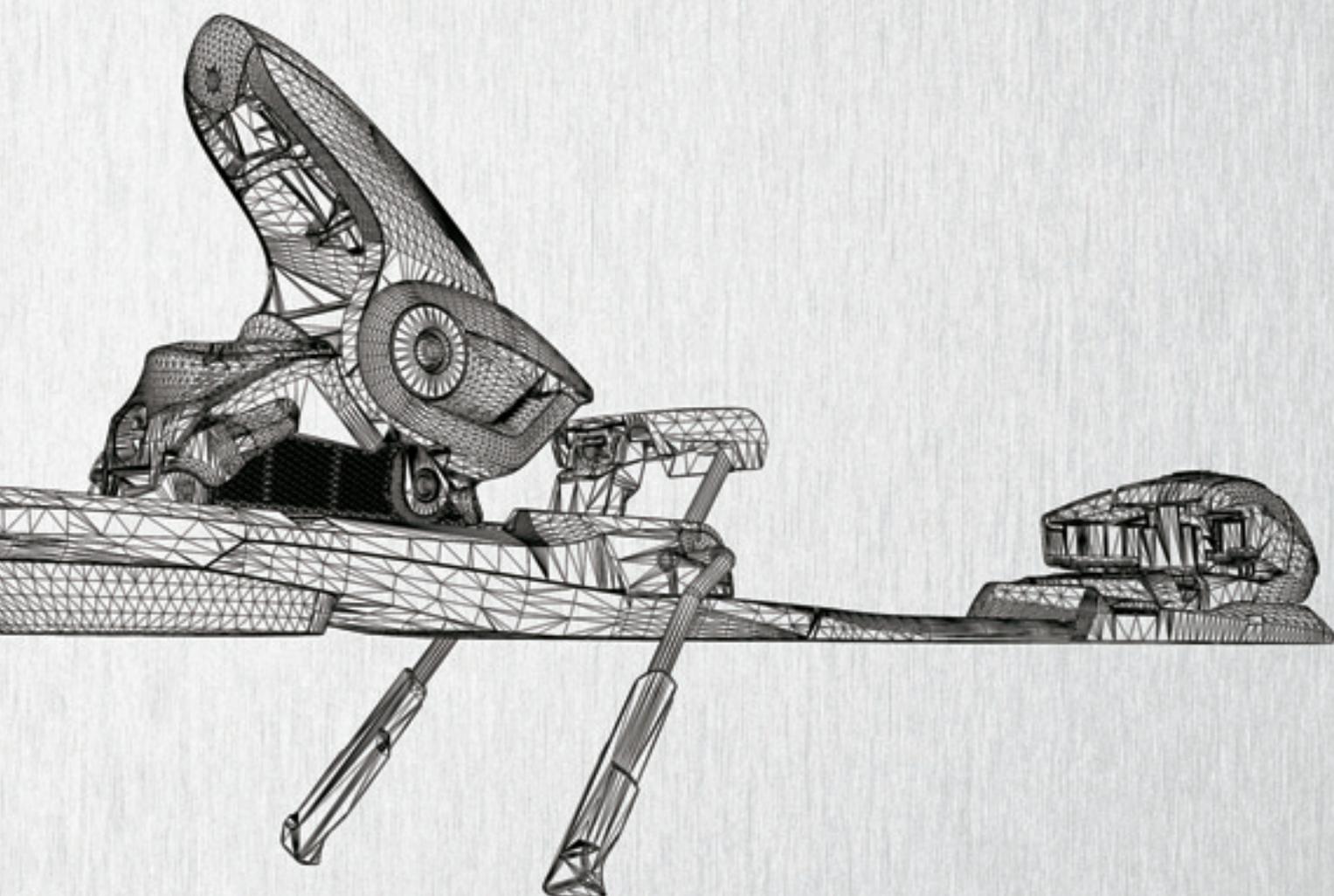
Mount the binding in accordance to the procedures specified in this manual.



NOTES

A large rectangular area filled with a fine grid pattern, intended for writing notes.

RENTAL BINDINGS



TYROLIA RENTAL LINE 2011.12

Model	Ramp angle (mm)	Z-DIN	kg	lbs	Weight set	Drill template	Toe			
							Toe type	Toe system	AFD	
SP 130 ABS DEMO AERO	5.0	4-13	from 42	from 92	2760 g	SP 2003 W / FAT yellow bushings	AERO OT	RACE DIAGONAL	ABS	
SP 120 ABS	5.0	4-12	from 42	from 92	2700 g	SP 2003 W / FAT yellow bushings	LD OT	FULL DIAGONAL	ABS	
SP 120 ABS WIDE 97	5.0	4-12	from 42	from 92	2700 g	SP 2003 W / FAT yellow bushings	LD OT	FULL DIAGONAL	ABS	
SP 100 ABS	5.0	2.5-10	from 26	from 57	2590 g	SP 2003 W / FAT yellow bushings	SL OT	FULL DIAGONAL	ABS	
SP 100 ABS FAT 115 (6 mm screws)	5.0	2.5-10	from 26	from 57	2590 g	SP 2003 W / FAT yellow bushings	SL OT	FULL DIAGONAL	ABS	
SP 75 ABS	5.0	1.5-7.5	18-84	39-187	2490 g	SP 2003 W white bushings	SL LITE OT	FULL DIAGONAL	ABS	
SP 45	1.0	0.75-4.5	10-48	22-105	1670 g	SP 2003 W / FAT red bushings	SL KID OT	FULL DIAGONAL	TEFLON	
SR 100	6.5	2.5-10	from 26	from 57	2125 g	SR 2003 W yellow arrow	SL	FULL DIAGONAL	TEFLON	
SR 100 FAT 115	6.5	2.5-10	from 26	from 57	2140 g	SR 2003 W yellow arrow	SL	FULL DIAGONAL	TEFLON	
SRL 100	6.5	3-10	from 31	from 67	1910 g	SR 2003 W yellow arrow	SL	FULL DIAGONAL	TEFLON	
SR 45	1.5	0.75-4.5	10-48	22-105	1260 g	SR 2003 W red arrow * green arrow	SL KID	FULL DIAGONAL	TEFLON	
BYS										
BYS 100	3.5	2.5-10	from 26	from 57	1890 g	92 W / FAT	SL	FULL DIAGONAL	ABS	
BYS 75 JUNIOR	7.5	2-7.5	22-84	48-187	1775 g	92 W / FAT	SL LITE OT	FULL DIAGONAL	TEFLON	
B ² YS 45	1.5	0.75-4.5	10-48	22-105	1260 g	94 W	SL KID	FULL DIAGONAL	TEFLON	

DATASHEET

		Heel						Boot sole			
Stand height	Length adjustment range (mm)	Heel type	Heel system	Brake type	Stand height	Length adjustment range (mm)	Single Code	Mondo-point	Length (mm)	Standard	
26.0	64	RENT OT	RENTAL	PB LD 78	31.0	60	A-6	22-36	263-391	ADULT	
26.0	64	RENT OT	RENTAL	PB LD 78	31.0	60	A-6	22-36	263-391	ADULT	
26.0	64	RENT OT	RENTAL	PB LD WIDE 97	31.0	60	A-6	22-36	263-391	ADULT	
26.0	64	RENT OT	RENTAL	PB LD 78	31.0	60	A-6	22-36	263-391	ADULT	
26.0	64	RENT OT	RENTAL	PB LD FAT 115	31.0	60	A-6	22-36	263-391	ADULT	
26.0	40	RENT OT	RENTAL	PB LD 78	31.0	36	A-T	22-30	263-343	ADULT	
24.0	40	SL KID OT	RENTAL	SL KB SYMPRO 74	25.0	48	a-H	15-25	191-294	A / C	
15.5	—	RENT OT	RENTAL	PB LD 78	22.0	84	A-V	22-31	263-351	ADULT	
15.5	—	RENT OT	RENTAL	PB LD FAT 115	22.0	84	A-V	22-31	263-351	ADULT	
15.5	—	SL	RENTAL	PB LD 78	22.0	84	—	22-31	266-350	ADULT	
13.5	—	SL KID OT	RENTAL	SL KB 74	15.0	52	b-o	15-21	199-255	A / C	
							* j-w/F	19-24	* (231-287)		
17.5	—	RENT	STANDARD	PB LD 78	21.0	—	Black	23-26.5	Black = 289	ADULT	
							Yellow	27-30.5	Yellow = 329		
							Silver	31-34	Silver = 365		
13.5	—	RENT	STANDARD	PB LD 78	21.0	—	Red	23-24.5	Red = 281	ADULT	
— 13.5	—	SL KID	STANDARD	SL KB 74	15.0	—	Blue	15-16.5	Blue = 201	A / C	
							Black	17-18.5	Black = 221		
							Yellow	19-20.5	Yellow = 241		
							Silver	21-22.5	Silver = 261		

* Spare Part: 162 538 A / C = ADULT/CHILDREN

PARTS-REFERENCE CHART RENTAL



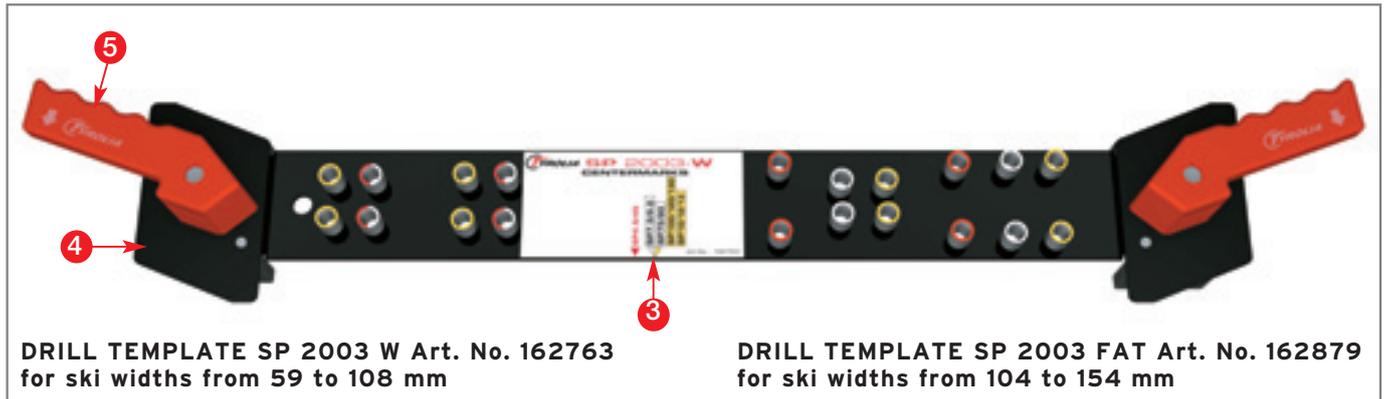
TOE PIECE

- 1 Adjustment screw
- 2 Visual indicator
- 3 ABS
- 4 Color coded base plate (BYS)
- 5 AFD-Teflon
- 6 Toe cover
- 7 ONE TOUCH lever
- 8 Base Plate
- 9 Bar Code
- 10 Single Code scale

HEEL PIECE

- 11 Brake pedal
- 12 Brake arms
- 13 Heel lever
- 14 Heel cover
- 15 Sole lug
- 16 Visual indicator
- 17 Heel housing
- 18 Adjustment screw
- 19 Single Code scale
- 20 ONE TOUCH lever

DRILL TEMPLATE SP 2003 W & SP 2003 FAT



1. COMPATIBILITY

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

TYROLIA
 SP 130 ABS DEMO AERO
 SP 120 ABS
 SP 100 ABS
 SP 75 ABS
 SP 45 ABS

All TYROLIA adult bindings come with 8 mm penetration screws and can be used with skis, of groups G1 & G2, except the SP 100 ABS FAT 115 model which is delivered with 6 mm penetration screws for G3 & G4 skis. The junior binding SP 75 ABS is delivered with 6 mm penetration screws for skis, groups G3 & G4. If it is mounted on skis, groups G1 & G2, or on HEAD/TYROLIA plates, replace them with longer screws (see screw chart in this manual - page 60/61). SP 45 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: TYROLIA offers different types of brakes. Refer to the brake overview on page 56-59 for brake and binding compatibility.

The Description of the brakes always includes a number like 74, 78, 93 or 115. This number stands for the maximum ski width in the brake area and not in the ski center!!!

2. POSITIONING THE DRILL TEMPLATE

Open the clamping jaws (4) by rotating the clamping handles (5) and then place the template on the ski.

Align the boot midsole 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 the clamping handles (5) 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 SP 75 ABS and SP 45 use a 4.1 Ø x 7.0 mm - drill bit for skis, groups G3 & G4.

DRILL THROUGH THE APPROPRIATE BUSHINGS

Model	Color of Bushings
SP 130 ABS Demo Aero	Yellow
SP 120 ABS	Yellow
SP 100 ABS	Yellow
SP 75 ABS	White
SP 45	Red



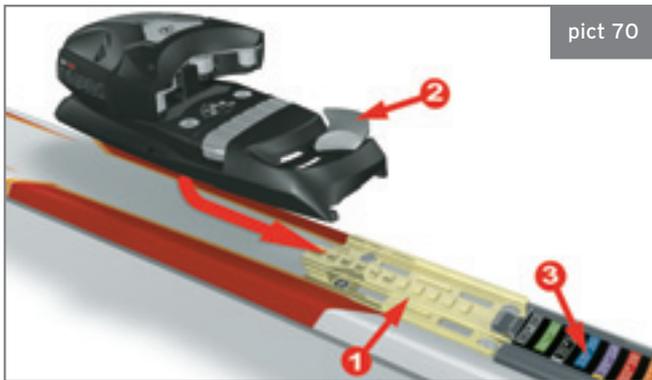
If required by the ski manufacturer, tap the hole. After drilling place a drop of TYROLIA glue into the holes. It lubricates the screws and seals the holes (pict 69).



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) (pict70).



pict 70

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

MOUNTING THE HEEL

Place the heel unit with its brake, guide and track over the holes. Tighten the screws in an X-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 71) located at the rear end of the heel piece. With boot inserted the pointer should rest in the middle of the scribed area.



pict 71

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 toe and heel to the corresponding alpha-setting (SINGLE CODE) of the ski boot (pict 72).



pict 72

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 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 100 NM at the toe and 400 NM at the heel are higher than the international standards recommend and are used solely at the skier's own risk!

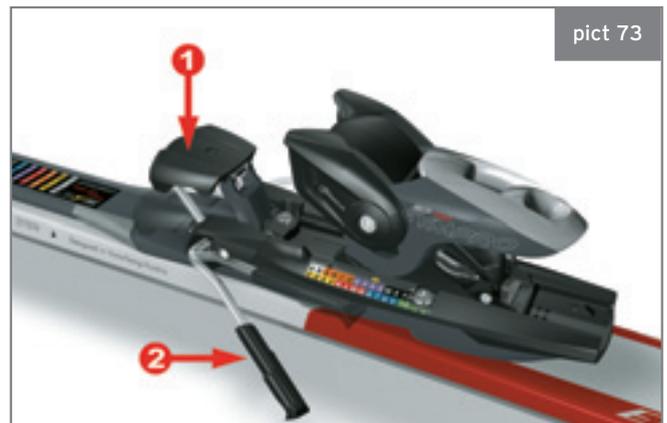
7. FUNCTION CHECK

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

NOTE: In some countries (USA) 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 73).



pict 73

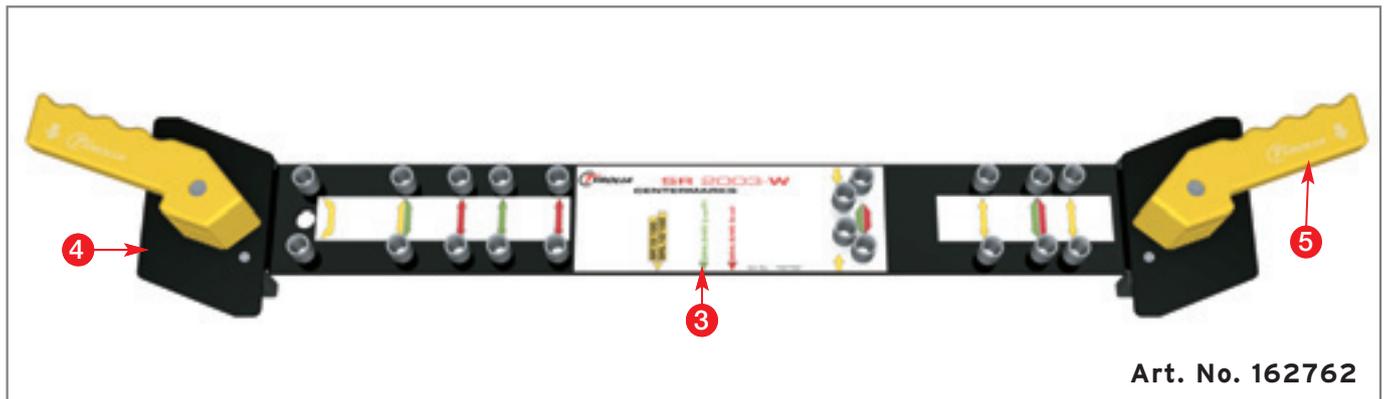
LATERAL ELASTICITY OF THE TOE

Press the boot laterally outward. The binding must re-center the boot easily and quickly from a 15mm lateral displacement. (Model SP 75 ABS and SP 45 - 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?

DRILL TEMPLATE SR 2003 W



Art. No. 162762

1. COMPATIBILITY

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

TYROLIA
SR 100
SRL 100
SR 45

SR 100 comes with 8 mm penetration screws and can be used with skis, groups G1 & G2. SR 45 comes with 6 mm penetration screws and is only for skis, groups G3 & G4. 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: TYROLIA offers different types of brakes. Refer to the brake overview on page 56-59 for brake and binding compatibility.

The Description of the brakes always includes a number like 74, 78, 93 or 115. This number stands for the maximum ski width in the brake area and not in the ski center!!!

2. POSITIONING THE DRILL TEMPLATE

Open the clamping jaws (4) by rotating the clamping handles (5) and then place template on the ski. Align the boot midsole 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 (5) and attach the template firmly to the ski.

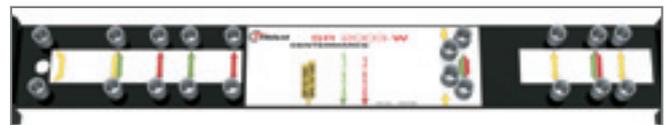
NOTE: Some ski manufactures do not use the center of boot sole location method. Always follow the ski manufacturer's instructions.

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. For SR 45 use a 4.1 Ø x 7.0 mm for skis, groups G3 & G4, if not otherwise recommended.

DRILL THROUGH THE APPROPRIATE BUSHINGS

Model	Color of Indicator
SR 100	Yellow
SRL 100	Yellow
SR 45 (Standard)	Red (b-o)
SR 45 (Spare Part)	Green (j-w/F)



If required by the ski manufacturer, tap the hole. After drilling place a drop of TYROLIA glue into the holes. It lubricates the screws and seals the holes (pict 74).



pict 74

4. MOUNTING

MOUNTING THE TOE

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



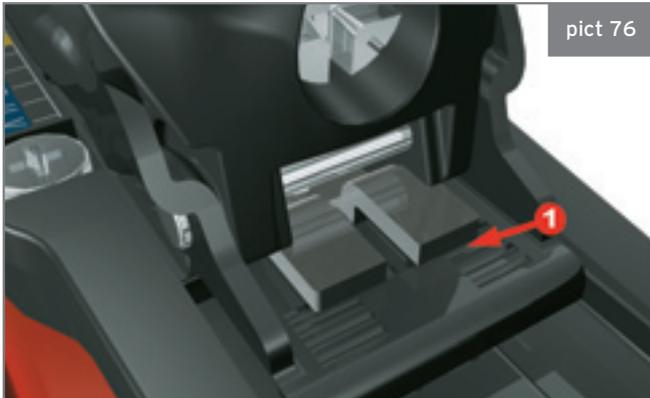
pict 75

MOUNTING THE HEEL

Place the heel unit with its brake, guide and track over the holes. Tighten the rear screws first, then the front screws.

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 76) located at the rear end of the heel piece. With boot inserted the pointer should rest in the middle of the scribed area.



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 77).



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 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 100 NM at the toe and 400 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 (USA) 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 78).



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 displacement. (Model SR 45 - 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?

SYMPRO-SYMRENT-SYSTEM 2011.12

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 TYROLIA'S 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.

TYROLIA made the commitment to offer a comprehensive product and service program.

THE TYROLIA-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:

SP 130 ABS DEMO AERO,
SP 120 ABS,
SP 100 ABS

- 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



SP 75 ABS

- High performing models for adult boot sole dimensions
- "ONE TOUCH" hand lever adjustment for toe (40 mm) and heel (36 mm)
- SINGLE CODE: "A-T" for ski boots from 263-343 mm sole length
- DIN settings from 1.5-7.5 cover all requirements
- Replaceable brake
- Diagonal toe

SP 45

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. The Single Code in lowercase letter refers to children's boots, whereas with capital letter to boots type A-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 4.5

SYMRENT:

SR 100/SRL 100

A technically proven workhorse for the discerning skier who rents

- Retail cosmetics enhance the value of the binding to the skier
- DIN range of 2.5 up to 10
- Diagonal toe
- Large 84 mm heel adjustment range
- SINGLE CODE "A-V" (only SR 100)
- Automatic toe and heel height adjustment
- "ONE TOUCH"- Hand lever adjustment for the heel (only SR 100)
- Replaceable brake

SR 45

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 "b-o" (199-255 mm) standard, or "j-w/F" (231-287 mm) with spare part: 162 538)
- "ONE TOUCH"- Hand lever adjustment of the heel
- Replaceable brake
- Easy to open, easy to close
- For skis, groups G3 & G4
- DIN range 0.75 up to 4.5

BYS - BYS JUNIOR - B²YS 2011.12

RENTAL REVOLUTION

When customers enter your shop to rent gear they have only one thing in mind: enjoying the snowy mountains outside your window. Nothing against you or your shop, skiing down slopes is just way more fun than waiting in line for equipment. Calibrating, mounting and fitting can take ages, unless you've got HEAD'S BYS System, not only speeding up your rental business, but also putting smiles on the faces of your customers and getting them out on the snow.

SIMPLICITY RULES

The breakdown. Fitting, mounting and adjusting is extremely time consuming. With the variables of ski length, boot size, weight, height and riding style the possible combinations amount to over 2'500 set ups per season in a typical rental operation. With BYS you can break that number down to less than 100. How? through simplification: HEAD BYS boots are reduced to three fixed sole-lengths per size-run, each perfectly fitting into corresponding pre-adjusted bindings.

1, 2, SKI

Add some color to your life. HEAD's BYS system categorizes all rental gear into three clear segments by coding them with the colors black, yellow and silver. In just two simple steps, customers will be walking out of your shop and hitting the slopes with the right equipment. All they have to do is 1) choose a boot and 2) choose the matching ski with the same color tag. That's safe, easy and time efficient rental gear handling.

FACTORY SEALED AND -PRE-SET

It just keeps getting better and better: Start replenishing your boot fleet with BYS boots. The more, the better. For maximum savings convert your entire fleet - boots and skis. HEAD RENTAL BYS is a pre-set and pre-mounted system. All skis are shipped with ready-to-go installed bindings, nicely shrink-wrapped along with a pre-season inspection certificate. Forget about all the hassles of mounting and pre-season calibrations. All you have to do is open the box and make customers happy. It's an easy job with the BYS Rental System.

BINDINGS BYS 100

- Features:** Fitted and ready to go
 Non-adjustable length
 No rental track
 Each pair is 1 kg (2.2 pounds) lighter than similar traditional bindings
 Color coded barcode holder
- Setting:** Each skier has only 3 possible DIN settings depending on the color coding. The value of the binding setting does not need to be changed if a boot is used with a different size within the same color code.
- Sizes:** DIN 2.5 - 10



BINDINGS BYS 75 JUNIOR

- Features:** Fitted and ready to go
 Non-adjustable length,
 No rental track
 Each pair is 0.75 kg (more than a pound) lighter than similar traditional bindings
 Color coded barcode holder
- Sizes:** DIN 2.0 - 7.5



BINDINGS B²YS 45

- Features:** Fitted and ready to go
 Non-adjustable length
 No rental track
 Each pair is 0.5 kg (more than a pound) lighter than similar traditional bindings
 Color coded barcode holder
- Setting:** Each skier has only 4 possible DIN settings depending on the color coding. The value of the binding setting does not need to be changed if a boot is used with a different size within the same color code.
- Sizes:** DIN 0.75 - 4.5



SYMPRO-SYMRENT-BYS ON THE SHOP FLOOR

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.

TYROLIA 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 SR, all you need to do is follow our simple procedure.

1. Mount all bindings according to the TYROLIA SR procedures. 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 80)!
You can get SINGLE CODE stickers as a spare part.

"SINGLE CODE" sticker set Art. no. 162561

For this procedure the TYROLIA Rental Boot Indicator (art.no. 162617) can be used.



pict 80

RENTAL INSPECTION SUMMARY

Since it is impractical to perform a full inspection each time a system is rented, a routine of preseason 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.

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.

PRE-SEASON INSPECTION

Preseason inspections are performed on components of the release system: bindings and boots.

All rental bindings, new and used, are visually inspected, and then tested using specially selected Reference Boots. Bindings that fail go through a troubleshooting procedure (see page 67/68) to identify and correct the deviation or malfunction. If this procedure does not correct the problem, the binding is removed from inventory. 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. In addition, one boot per "cell" is tested for boots that are new to the rental inventory. A cell is all boots of the same make, model, age, and shell size. A random selection of 5% of all boots, previously accepted into inventory, is also tested. Tests are performed with a test device and a pair of specially selected reference bindings. If a boot fails, all boots from that cell are then tested. Boots that fail and cannot be repaired are removed from inventory.

INSEASON INSPECTION

In season inspections are performed on complete rental systems to ensure that the equipment is adjusted appropriately and continues to function correctly. Typically 5% of the rental inventory is tested during each two weeks sampling period. The random sample is equally divided between equipment that is available for rental and equipment that has just been rented. The equipment in the "as rented" category is from real skiers in the condition in which it is either dispatched or returned, while the "available for rental" equipment may be set up for fictitious skiers. Only single skis, not pairs, are tested, and testing at the toe is only required in one direction. A count is maintained of test results which exceed allowable limits. The magnitude and frequency of these deviations determines the frequency of future inspections. Shops which fail an inspection must sample daily until the source of the problem is found and corrected. Then, as inspection results improve, the frequency of sampling and inspection is relaxed.

INSPECTION PROCEDURES

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.

PRE-SEASON TEST

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 can not 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, BY5 or B²YS.
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 twist-three 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.

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 Range provided in Table [A].
11. Set the ski aside if the Test result in any directions of release is outside the Inspection Range in Table [A].
12. Follow Troubleshooting Procedure on page 67/68 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 Range 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 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 pre-season 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].
Due to the fixed length of BY5 bindings there are adapted tables for all BY5 and B²YS system bindings (table [B], [C], [D]).

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

Table [A] Pre-season Binding Inspection

Color Code	Sole length mm	Release Indicator Setting	Reference Torque Twist Nm	Reference Torque Forward Nm	Twist Inspection Range Nm	Forward Inspection Range Nm	Twist In-Use Range Nm	Forward In-Use Range Nm
Black	289 mm	5.0	43 Nm	165 Nm	37-50 Nm	141-194 Nm	31-58 Nm	120-229 Nm
Yellow	329 mm	6.0	58 Nm	229 Nm	50-67 Nm	194-271 Nm	43-78 Nm	165-320 Nm
Silver	365 mm	6.0	67 Nm	271 Nm	58-78 Nm	229-320 Nm	50-91 Nm	194-380 Nm

Table [B] Pre-season Binding Inspection - BY5 100

Color Code	Sole length mm	Release Indicator Setting	Reference Torque Twist Nm	Reference Torque Forward Nm	Twist Inspection Range Nm	Forward Inspection Range Nm	Twist In-Use Range Nm	Forward In-Use Range Nm
Red	281 mm	4.0	37 Nm	141 Nm	31-43 Nm	120-165 Nm	27-50 Nm	102-194 Nm

Table [C] Pre-season Binding Inspection - BY5 75 JUNIOR

Color Code	Sole length mm	Release Indicator Setting	Reference Torque Twist Nm	Reference Torque Forward Nm	Twist Inspection Range Nm	Forward Inspection Range Nm	Twist In-Use Range Nm	Forward In-Use Range Nm
Blue	201 mm	1.0	11 Nm	40 Nm	8–14 Nm	29–52 Nm	5–17 Nm	18–64 Nm
Black	221 mm	1.5	14 Nm	52 Nm	11–17 Nm	40–64 Nm	8–20 Nm	29–75 Nm
Yellow	241 mm	2.25	20 Nm	75 Nm	17–23 Nm	64–87 Nm	14–27 Nm	52–102 Nm
Silver	261 mm	3.0	27 Nm	102 Nm	23–31 Nm	87–120 Nm	20–37 Nm	75–141 Nm

Table [D] Pre-season Binding Inspection - B²YS 45

PRE-SEASON BOOT PREPARATION

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

- Clean all boots with a mild detergent and water, and repair or replace damaged or missing parts.
- Visually check:
 - Conformance 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.
 - 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.
 - Boot sole condition. If the boot sole is damaged, worn, or contaminated at contact points with the binding or AFD in a manner which can not be corrected, the boot may be incompatible with the binding, "Verify boot sole dimensions" on page 53.
 - Brake compatibility with sole.
 - Rubber and/or metal sole protectors. If such materials contact the binding or AFD the boot may be incompatible with the binding.
 - Mold flashings. Flashing which can be seen or felt at contact points with the binding, brake, or AFD must be carefully removed.
- 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.

- 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).
- For used boots, take a 5% (but not less than 16 or more than 80) random sample of the entire inventory, see Table [E]. 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], [D], in the Boot Inspection procedures that follow, the Sole Length and release Indicator Setting columns should be ignored.

- Randomly select a pair of bindings that have passed the pre-season inspection from each binding type; adult, junior, child.
- Lubricate all boot/binding contact points with a mild liquid detergent.
- 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.

- In each Sole Length Category rank the boots by sole length and select the middle boot.
- 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], [D]. Use the Reference Torque corresponding to Skier Code [L] for the Adult binding, [J] for Junior binding, and [E] for the Child binding.
- Rinse the lubricant from one binding and mark it "clean". Mark the other "lubricated".
- 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).
- 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 Range provided in Table [A] for Skier Code used to set up the Reference Binding (L, J, or F).
- Repeat the Visual check on all boots that have been set aside, correct any defects noted, and retest. Remove from inventory boots that fail the retest.
- 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.

INSEASON 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:

- After 7 days of operation.
- If the sample passes the next sampling is taken after another 7 days operation.
- If two consecutive samples pass, sampling frequency is increased to 14 days (reduced sampling schedule).
- 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 have been accrued. However, if class II or class III deviation

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 [E]. 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.

INSEASON INSPECTION

1. Take a random sample of the rental inventory as determined by Table [E]. 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 Range for the appropriate Skier Code, see ISO 11088 Release/Retention Adjustment Chart (page 71).
6. If the results are within the Inspection Range, one value above to one value below the reference value, the unit passes.
7. If the results are outside Inspection Range but within the In-Use Range, two values above to two values below the reference value, count the unit as a Class I Deviation.
8. If the results are outside the In-Use Range, count the unit as a 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 Class I Deviations.
10. If more than the maximum number of Class I Deviations given in Table [E] are found in the sample, or a single 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 67/68 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 Class I and Class II Deviations, whether the sample passed or failed and any actions taken. There is not need to record the identity of units tested or actual Test Results.

	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 [E]

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 TYROLIA Boot Visual Inspection.

2. The skier's boot should also pass the Visual Inspection. If any questions exist regarding the quality of the boot, retail-type testing should be used.
3. The binding should be adjusted and its indicators set per current TYROLIA 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 HEAD/TYROLIA Certified Mechanic are required on all shop forms to qualify for the HEAD/TYROLIA Dealer Indemnity Program.

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 "preseason 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

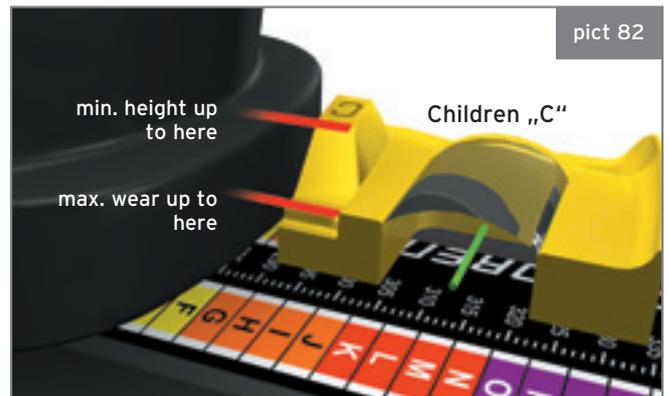
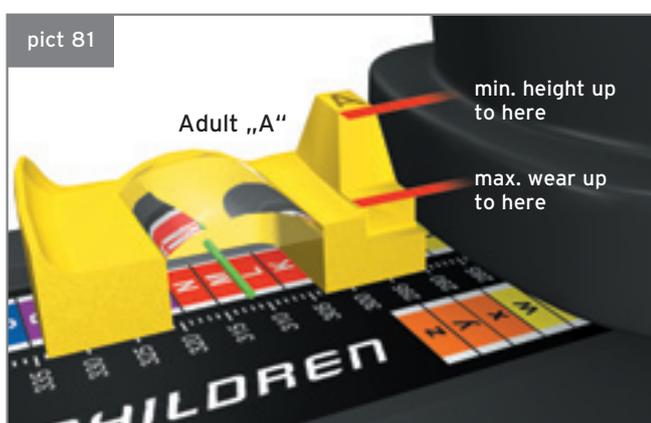
- Binding contact surfaces require a high quality hard, low-friction material. Check both lower shell and any separately attached inserts.
- If you can easily scratch the surface of the sole with your fingernail, that's an indication of extremely soft material that can degrade system performance.

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

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

4. VERIFY BOOT SOLE DIMENSIONS

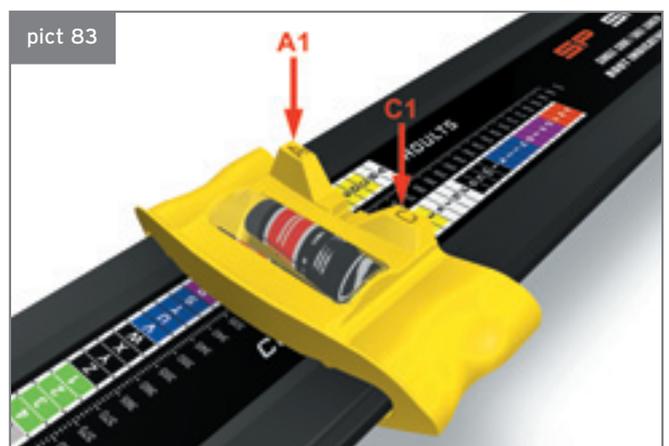
- Ski boots must meet international standard specifications.
- Use the HEAD/TYROLIA Boot Rental Indicator to determine whether wear is excessive. The most critical dimension for HEAD/TYROLIA bindings is the front surface and height of the boot toe. Any boots worn past the indicated amounts should be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



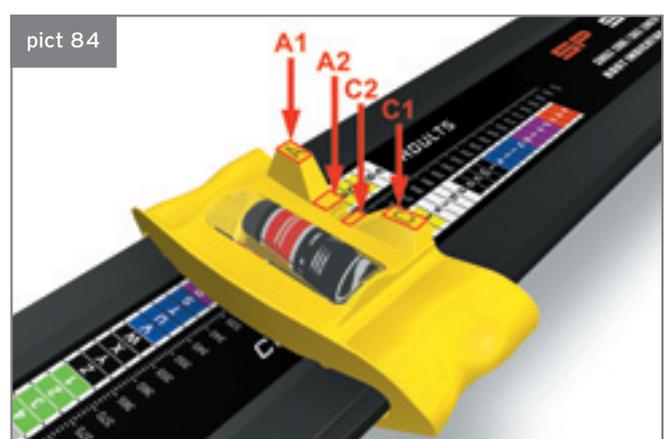
THE HEAD/TYROLIA BOOT INDICATOR art. no. 162617

This TYROLIA 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 TYROLIA rental bindings: the SINGLE CODE (see pict 83).



2. Boot sole wear: The standardized interfaces (contact boot sole with sole lugs) are important in the functioning of HEAD/TYROLIA 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) or adult (A 2) post (see pict 84).
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" (C1) or "Adult" (A1) (see pict 84). Replace toe pads if worn.



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 85).
6. The marks "A/C" help to select a "Child" boot from an "Adult" by indicating the standardized sole width.



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 TYROLIA bindings.

Boots which fail any point should be repaired or replaced.

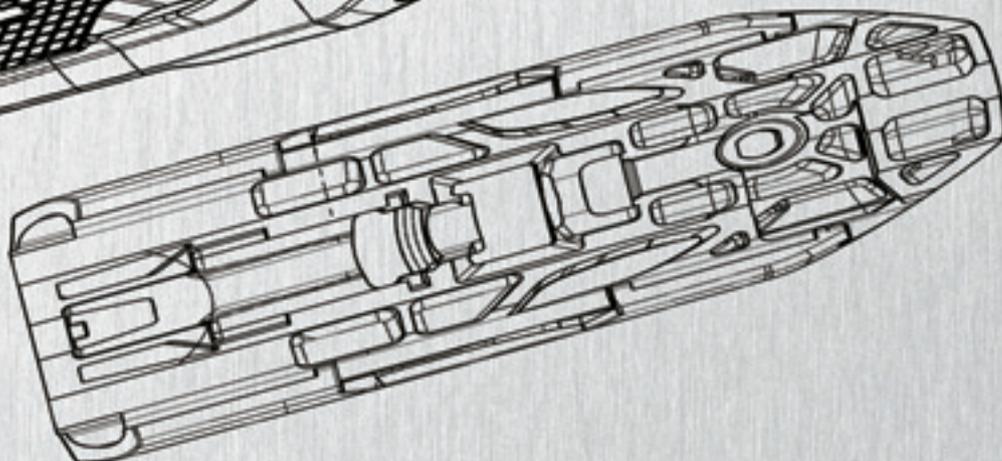
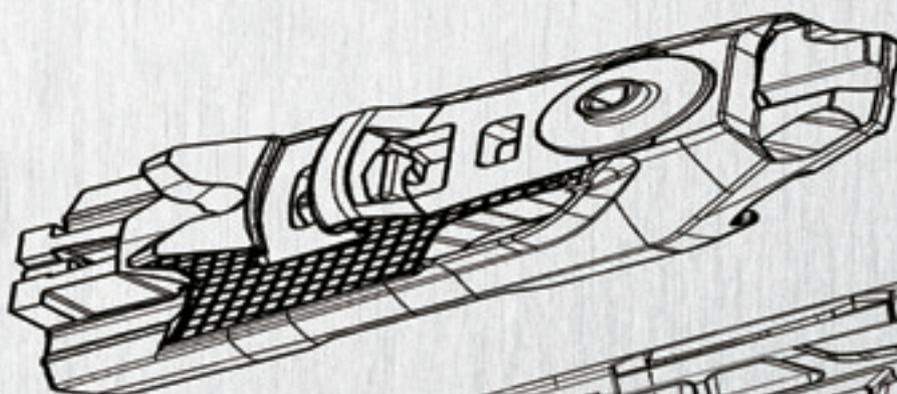
These checks apply only to boots used with TYROLIA bindings. Consult other binding manufacturers for their used boot specifications.

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 HEAD/TYROLIA 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 HEAD/TYROLIA "reference" binding that has displayed release values within the inspection tolerance on the TYROLIA 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 a HEAD/TYROLIA binding.

BRAKES SPARE PARTS MAINTENANCE SERVICE



HEAD/TYROLIA BRAKE LINE 2011.12

ATTENTION: Please visit the Online Dealer Support of www.tyrolia.com or the HEAD/TYROLIA Spare Part Management <http://oms1.head.com> to search and identify all relevant information about ski bindings, their spare parts and technical data" (see page 6-7).

Ski width	Art. No.	Brake	Picture	HEAD	TYROLIA
up to 74 mm	162399	SL Kid Brake 74		SL 45	SL 45 SR 45 B ² YS 45
up to 74 mm	162559	SL Kid Brake Sympro 74		—	SP 45
up to 84 mm	162658	SL Kid Brake wide 84		SL 45	SL 45 SP 45 SR 45 B ² YS 45
up to 72 mm	162764	SL Junior Brake 72-05		MOJO 7.5 SL 90 ABS JR RACE SL 75	PEAK 7.0 AC SL 70 AC
up to 90 mm	162776	SL Junior Brake wide 90		MOJO 7.5 SL 90 ABS JR RACE SL 75	PEAK 7.0 AC SL 70 AC
up to 78 mm	162642	SL Brake 78-04		SX 10	SX 10 PEAK 11 SL 100
up to 90 mm	162755	SL Brake wide 90		SX 10	SX 10 PEAK 11 SL 100
up to 115 mm	162939	SL Brake Fat 115		SX 10	SX 10 PEAK 11 SL 100
up to 74 mm	162941	SL Kid Brake LR 74		LR 4.5	LR 4.5
up to 84 mm	162954	SL Kid Brake LR wide 84		LR 4.5	LR 4.5
up to 78 mm	162 942	SL Brake LR 78		MYA 9 LR LR 7.5	LR 10 LR 9.0 LR 7.0 AC
up to 90 mm	162949	SL Brake LR wide 90		MYA 9 LR LR 7.5	LR 10 LR 9.0 LR 7.0 AC
up to 78 mm	162943	Powerrail Brake SL 78		PR 11 MYA 10 PR	PR 10 POWER 11 Promo

Ski width	Art. No.	Brake	Picture	HEAD	TYROLIA
up to 90 mm	162944	Powerrail Brake SL wide 90		PR 11 MYA 10 PR	PR 10 POWER 11 Promo
up to 80 mm	162945	Powerrail Brake LD 80		PRD 14 PRD 12 MYA 12 PRD	POWER 12 D POWER 11 D
up to 88 mm	162946	Powerrail Brake LD 88		PRD 14 PRD 12 MYA 12 PRD	POWER 12 D POWER 11 D
up to 97 mm	162947	Powerrail Brake LD wide 97		PRD 14 PRD 12 MYA 12 PRD	POWER 12 D POWER 11 D
up to 115 mm	162948	Powerrail Brake LD FAT 115		PRD 14 PRD 12 MYA 12 PRD	POWER 12 D POWER 11 D
up to 78 mm	162850	Power Brake Race PRO 16-78		FF PRO 20 (X) RD FF PRO 20 (X) RS FF PRO 18 (X) Sale FF PRO 16 (X) RD FF PRO 16 GTO 15 MOJO 18 (X) MOJO 15	FF PRO 17 PEAK 18 X PEAK 15
up to 78 mm	162851	Power Brake Race PRO 17-78		FF PRO 20 (X) RD FF PRO 20 (X) RS FF PRO 18 (X) Sale FF PRO 16 (X) RD FF PRO 16 GTO 15 MOJO 18 (X) MOJO 15	FF PRO 17 PEAK 18 X PEAK 15
up to 78 mm	162904	Power Brake Race PRO 18-78		FF PRO 20 (X) RD FF PRO 20 (X) RS FF PRO 18 (X) Sale FF PRO 16 (X) RD FF PRO 16 GTO 15 MOJO 18 (X) MOJO 15	FF PRO 17 PEAK 18 X PEAK 15
up to 88 mm	162940	Power Brake Race PRO wide 88		FF PRO 20 (X) RD FF PRO 20 (X) RS FF PRO 18 (X) Sale FF PRO 16 (X) RD FF PRO 16 GTO 15 MOJO 18 (X) MOJO 15	FF PRO 17 PEAK 18 X PEAK 15
up to 88 mm	162957	Power Brake Race PRO wide 88 FR		FF PRO 20 (X) RD FF PRO 20 (X) RS FF PRO 18 (X) Sale FF PRO 16 (X) RD FF PRO 16 GTO 15 MOJO 18 (X) MOJO 15	FF PRO 17 PEAK 18 X PEAK 15

Ski width	Art. No.	Brake	Picture	HEAD	TYROLIA
up to 97 mm	162875	Power Brake Race PRO wide 97		FF PRO 20 (X) RD FF PRO 20 (X) RS FF PRO 18 (X) Sale FF PRO 16 (X) RD FF PRO 16 GTO 15 MOJO 18 (X) MOJO 15	FF PRO 17 PEAK 18 X PEAK 15
up to 115 mm	162876	Power Brake Race PRO FAT 115		FF PRO 20 (X) RD FF PRO 20 (X) RS FF PRO 18 (X) Sale FF PRO 16 (X) RD FF PRO 16 GTO 15 MOJO 18 (X) MOJO 15	FF PRO 17 PEAK 18 X PEAK 15
up to 130 mm	162877	Power Brake Race PRO XFAT 130		FF PRO 20 (X) RD FF PRO 20 (X) RS FF PRO 18 (X) Sale FF PRO 16 (X) RD FF PRO 16 GTO 15 MOJO 18 (X) MOJO 15	FF PRO 17 PEAK 18 X PEAK 15
up to 150 mm	162958	Power Brake Race PRO XXFAT 150		FF PRO 20 (X) RD FF PRO 20 (X) RS FF PRO 18 (X) Sale FF PRO 16 (X) RD FF PRO 16 GTO 15 MOJO 18 (X) MOJO 15	FF PRO 17 PEAK 18 X PEAK 15
up to 78 mm	162578	Power Brake LD 78		FF PRO 14 FF PRO 11 MOJO 12 MOJO 11 LX 12	FF PRO 14 FF PRO 11 PEAK 12 LD 12 SP 130 ABS DEMO AERO SP 120 ABS SP 100 ABS SP 75 ABS SR 100 SRL 100 BYS 100 BYS 75
up to 88 mm	162805	Power Brake LD wide 88		FF PRO 14 FF PRO 11 MOJO 12 MOJO 11 LX 12	FF PRO 14 FF PRO 11 PEAK 12 LD 12 SP 130 ABS DEMO AERO SP 120 ABS SP 100 ABS SP 75 ABS SR 100 SRL 100 BYS 100 BYS 75
up to 88 mm	162956	Power Brake LD wide 88 FR		FF PRO 14 FF PRO 11 MOJO 12 MOJO 11 LX 12	FF PRO 14 FF PRO 11 PEAK 12 LD 12 SP 130 ABS DEMO AERO SP 120 ABS SP 100 ABS SP 75 ABS SR 100 SRL 100 BYS 100 BYS 75

Ski width	Art. No.	Brake	Picture	HEAD	TYROLIA
up to 97 mm	162874	Power Brake LD wide 97		FF PRO 14 FF PRO 11 MOJO 12 MOJO 11 LX 12	FF PRO 14 FF PRO 11 PEAK 12 LD 12 SP 130 ABS DEMO AERO SP 120 ABS SP 100 ABS SP 75 ABS SR 100 SRL 100 BYS 100 BYS 75
up to 115 mm	162603	Power Brake LD FAT 115		FF PRO 14 FF PRO 11 MOJO 12 MOJO 11 LX 12	FF PRO 14 FF PRO 11 PEAK 12 LD 12 SP 130 ABS DEMO AERO SP 120 ABS SP 100 ABS SP 75 ABS SR 100 SRL 100 BYS 100 BYS 75
up to 130 mm	162710	Power Brake LD XFAT 130		FF PRO 14 FF PRO 11 MOJO 12 MOJO 11 LX 12	FF PRO 14 FF PRO 11 PEAK 12 LD 12 SP 130 ABS DEMO AERO SP 120 ABS SP 100 ABS SP 75 ABS SR 100 SRL 100 BYS 100 BYS 75
up to 150 mm	162959	Power Brake LD XXFAT 150		FF PRO 14 FF PRO 11 MOJO 12 MOJO 11 LX 12	FF PRO 14 FF PRO 11 PEAK 12 LD 12 SP 130 ABS DEMO AERO SP 120 ABS SP 100 ABS SP 75 ABS SR 100 SRL 100 BYS 100 BYS 75
up to 78 mm	162499	DRAGON BRAKE 78		FF PRO 14 FF PRO 11 MOJO 12 MOJO 11 LX 12	FF PRO 14 FF PRO 11 PEAK 12 LD 12 SP 130 ABS DEMO AERO SP 120 ABS SP 100 ABS SP 75 ABS SR 100 SRL 100 BYS 100 BYS 75

HEAD SCREW OVERVIEW - 2011.12

Model	Article	Screw types															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RACEPLATE JUNIOR (G3 & G4)																	
RACEPLATE JUNIOR (G1 & G2)																	
SPEEDPLATE PLUS 13 POWER PLATE 9 JUNIOR RACE PLATE 11																	
LITERAIL BASE																	
POWERRAIL PRO BASE POWERRAIL BASE																	
SL 45 (G3 & G4)																	
MOJO 7.5 (G1 & G2) SL 75 (G1 & G2)																	
MOJO 7.5 (G3 & G4) SL 75 (G3 & G4) SL 70 AC (G3 & G4)																	
SL 90 ABS JR RACE (G3 & G4)																	
SL 90 ABS JR RACE (G1 & G2)																	
MYA 9 LR LR 7.5 LR 4.5																	
LX 12																	
PRD 14 PRD 12 MYA 12																	
MOJO 12 MOJO 11 SX 10																	
GTO 15																	
FREEFLEX PRO 14 FREEFLEX PRO 11																	
FREEFLEX PRO 16																	
FREEFLEX PRO 18 X MOJO 18 X MOJO 15																	
	160 016	5.5 x 13.4															
	160 018	5.5 x 18.5															
	160 030	5.5 x 15.5															
	160 031	5.5 x 20.5															
	162 319	5.5 x 14.0															
	162 376	5.5 x 13.4															
	162 383	5.5 x 21.5															
	162 401	5.5 x 15.5															
	162 402	5.5 x 11.4															
	162 416	5.5 x 19.4															
	162 417	5.5 x 26.5															
	162 419	5.5 x 17.6															
	162 426	5.5 x 16.9															
	162 455	5.7 x 10.7															
	162 460	5.5 x 30.5															
	162 488	5.5 x 19.5															
	162 524	5.5 x 20.5															
	162 526	5.5 x 11.2															
	162 570	5.5 x 23.0															
	162 639	5.5 x 9.0															
	162 719	5.5 x 12.7															
	162 780	5.5 x 13.7															
	162 785	5.7 x 10.5															
	162 786	5.8 x 8.8															
	162 789	5.5 x 11.0															
	162 852	5.5 x 8.6															
	162 915	5.5 x 10.65															
	162 916	5.5 x 11.3															
	162 917	5.5 x 13.3															
	162 919	5.7 x 14.6															

* if not otherwise mentioned, the screws are for skis, groups G1 & G2 (8 mm penetration)

TYROLIA SPARE PARTS RENTAL 2011.12

Model	Article	S Y M P R O / S Y M R E N T										
		SP 130 ABS Demo Aero	SP 120 ABS	SP 75 ABS	SP 45	SR 100	SRL 100	SR 45	BYS 100	BYS 75 Junior	BYS 45	
	Heel Guide	162 880	162 880	162 881	162 882	162 883	162 884** 162 885**					
	Brake 78	162 578	162 578	162 578		162 578		162 578	162 578			
	Brake 74				162 559							
	Brake 84				162 658							
	Brake 88	162 805	162 805	162 805		162 805		162 805	162 805			
	Brake 97	162 874	162 874	162 874		162 874		162 874	162 874			
	Brake FAT 115	162 603	162 603	162 603		162 603		162 603	162 603			
	Brake X FAT 130	162 710	162 710	162 710		162 710		162 710	162 710			
	Brake XX FAT 150	162 959	162 959	162 959		162 959		162 959	162 959			
	AFD				162 382							
	ABS	162 634	162 634	162 634								
	Toe Base Plate											
	Toe Cover	162 660										

* Heel Guide for „b-o“
** Heel Guide for „j-w/f“

Model	Article	S Y M P R O / S Y M R E N T							
		SP 130 ABS Demo Aero	SP 120 ABS	SP 75 ABS	SP 45	SR 100	SR 45	BYS 100	BYS 75 Junior
160 018	5.5 x 18.5								
160 030	5.5 x 15.5								
160 031	5.5 x 20.5								
162 332	5.5 x 10.3								
162 376	5.5 x 13.4								
162 383	5.5 x 21.5								
162 401	5.5 x 15.5								
162 416	5.5 x 19.4								
162 417	5.5 x 26.5								
162 418	5.5 x 27.5								
162 423	5.5 x 21.4								
162 426	5.7 x 16.9								
162 429	5.5 x 24.5								
162 455	5.7 x 10.7								
162 458	5.5 x 29.0								
162 460	5.5 x 30.5								
162 461	5.5 x 32.5								
162 488	5.5 x 19.5								
162 639	5.5 x 9.0								
162 640	5.5 x 7.0								
162 700	5.5 x 24.9								

* 4 Screws for Toe Track
* if not otherwise mentioned, the screws are for skis, groups G1 & G2 (8 mm penetration)

MAINTENANCE & SERVICE

VISUAL INSPECTION OF BINDING

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.

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?

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.

RETAIL TESTING

Completion and documentation of the following Retail Test Procedures is recommended for U.S.: required under the terms of the HEAD/TYROLIA 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 HEAD/TYROLIA alpine bindings, new as well as used.

1. Follow HEAD/TYROLIA procedures for inspection, mounting, adjustment, and maintenance as appropriate.
2. Confirm that toe and heel indicator values match those specified on the actual HEAD/TYROLIA 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 clock-wise 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 HEAD/TYROLIA Adjustment Chart.
5. If any test results fall outside the System Inspection Range, consult HEAD/TYROLIA Troubleshooting Procedures which follow this section.
6. With testing complete, the HEAD/TYROLIA 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".

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.

HEAD/TYROLIA offers for almost each binding, different brakes with wider (WIDE and FAT brakes) or longer (DRAGON brake) brake arms. Refer to the brake overview on page 56-59 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 most PowerRail and Literail 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 86).



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.

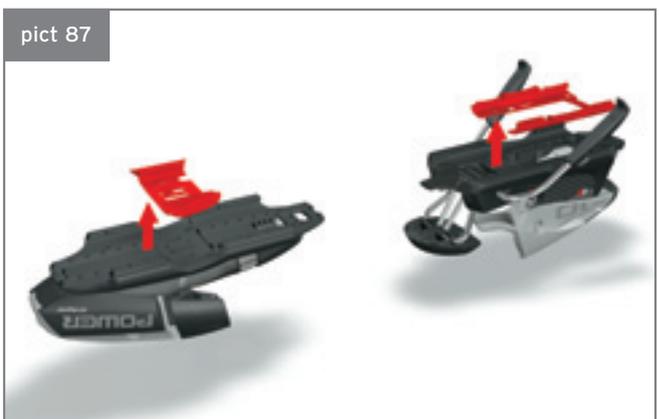
Art.No. - 162950 Play Compensator PR TOE ABS

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 87).

Lubricate the new inserts with HEAD/TYROLIA grease, clean the track, and slide toe and heel back in its original position on the rails.



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 88).



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

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 - see screw chart on page 60/61).

TAPPING

HEAD/TYROLIA 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:

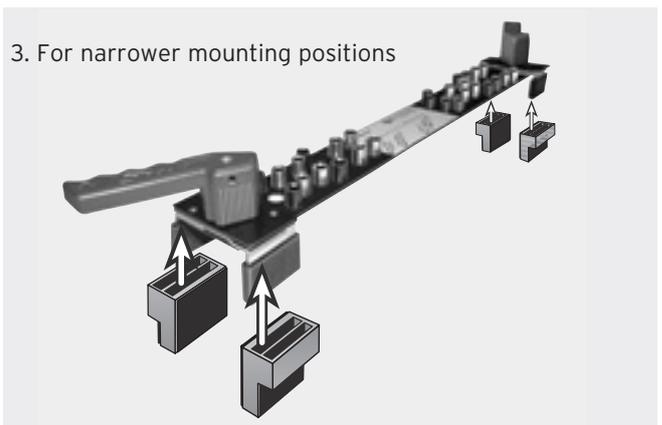
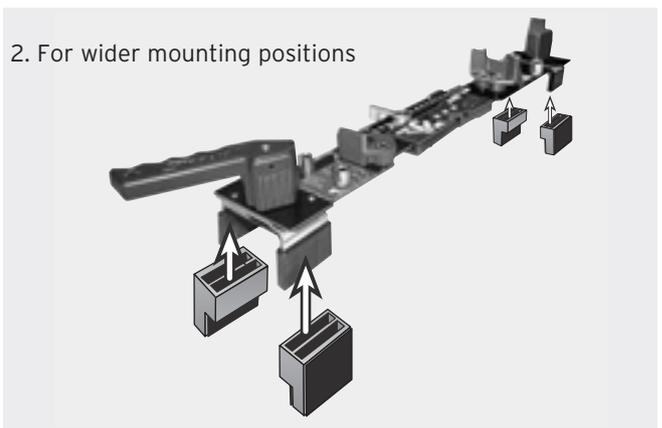
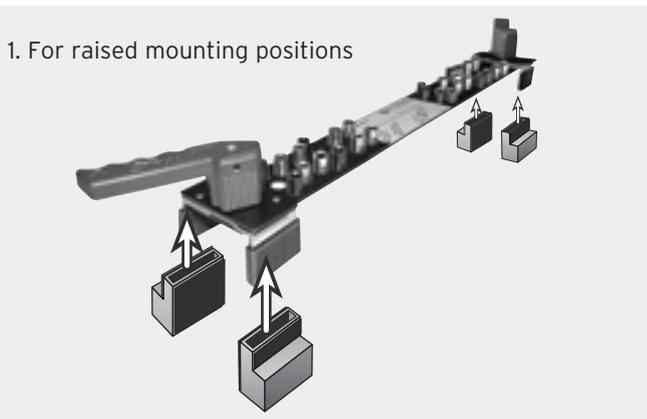
- smooth and easy mounting
- reduced risk of stripping a screw
- same momentum adjustment of the screwdriver regard less of the ski material
- increased mounting quality/precision
- fewer pull outs.

TEMPLATE "ADAPTER SET"

Compatible to all TYROLIA-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:



Ski Type	Standard Drill Templates (59-108 mm)	FAT Drill Templates (104-154 mm)
Raised Mounting Position (see pos.1)	50-99 mm	95-145 mm
Wider Mounting Position (see pos.2)	83-132 mm	128-178 mm
Narrower Mounting Position (see pos.3)	45-94 mm	90-140 mm

RACING (X)-BINDINGS

Certain binding models are produced by HEAD/TYROLIA each year for the exclusive use of qualified competitors under the supervision of HEAD/TYROLIA Technical Specialists. These bindings are not covered by either the HEAD/TYROLIA Warranty or any Dealer Indemnity Program. We recommend you decline to service them, and warn against their use. DIN settings ≥ 10 do not satisfy the standard. Protection assertions are not applicable. Adjustments exceeding this range are made on one's own risk.

CLEANING AND LUBRICATING

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

- Please use only HEAD/TYROLIA recommended lubrication:
TYROLIA grease - 160052
TYROLIA service - grease- spray - 162779
 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.

LUBRICATING THE TOE PIECE

AERO TOES

- Lubricate the adjustment screw and the guides of the main spring in the housing with the HEAD/TYROLIA service - grease spray.

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.



LUBRICATING THE HEEL

ALL RENTAL BINDINGS

- Mark heel position, open the hand lever and slide the heel off backwards. At the SR 100 and SRL 100 the guide lock has to be opened with a screwdriver (pict 90) to get the binding off.



LUBRICATE

- the edge of the release cam under the heel lug as shown in pict 91.



- both sides of the heel track (inside) over the entire length.
- the bearings of the opened hand lever on both sides (pict 92).



- 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.

SL 45 AND SR 45

LUBRICATE

- the contact areas between housing and the release cam on the frontside and the backside as shown in pict 93 and 94.
- both sides of the heel track (inside) over the entire length.



- the guiding channel of the release setting adjustment screw (pict 94).

pict 94



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

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.

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!

REPAIR OF DAMAGED MOUNTING HOLES OR BROKEN SCREWS

For repairing damaged holes, we suggest our special "Repair Set" - Art. no. 162 127. It consists of a hollow drill bit and plastic inserts (pict 95).

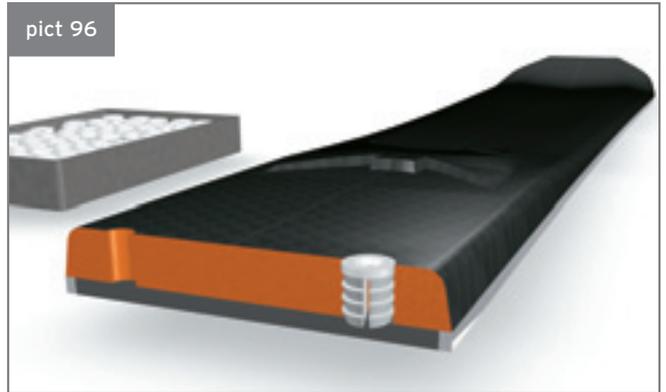
pict 95



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 96).

pict 96



SEALING OLD MOUNTING HOLES

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

pict 97



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; 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	Readjust, 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	Readjust to TYROLIA 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

ADJUSTMENT

										Mz (Nm)	My (Nm)
		SINGLE CODE									
		1	2	3	4	5	6	7	8		
		a-i	j-n	o-s/B	t/C-G	H-L	M-Q	R-V	V-6		
		≤230	231-250	251-270	271-290	291-310	311-330	331-350	≥351		
kg (lbs)	cm (ft "in")	SKIER CODE									
10-13 kg (22-29 lbs)		A	0,75	0,75	0,75	0,75				5	18
14-17 kg (30-38 lbs)		B	1,00	0,75	1,25	1,00				8	29
18-21 kg (39-47 lbs)		C	1,50	1,25	1,75	1,50	1,25			11	40
22-25 kg (48-56 lbs)		D	2,00	1,75	2,25	2,00	1,75	1,50		14	52
26-30 kg (57-66 lbs)		E	2,50	2,25	2,75	2,50	2,25	2,00	1,75	17	64
31-35 kg (67-78 lbs)		F	3,00	2,75	3,00	2,75	2,50	2,25	2,00	20	75
36-41 kg (79-91 lbs)		G		3,50	3,00	2,75	2,50	2,25	2,00	23	87
42-48 kg (92-107 lbs)	≤ 148 cm (≥ 4'10")	H			3,50	3,00	3,00	3,00	3,00	27	102
49-57 kg (108-125 lbs)	149-157 cm (4'11"-5'1")	I				4,50	4,00	3,50	3,50	31	120
58-66 kg (126-147 lbs)	158-166 cm (5'2"-5'5")	J					5,00	4,50	4,00	37	141
67-78 kg (148-174 lbs)	167-178 cm (5'6"-5'10")	K						5,00	4,50	43	165
79-94 kg (175-209 lbs)	179-194 cm (5'11"-6'4")	L							5,00	50	194
≤ 95 kg (≥ 210 lbs)	≤ 195 cm (≥ 6'5")	M							5,00	58	229
		N							6,00	67	271
		O							6,00	78	320
		P							7,50	91	380
									8,50	105	452
									9,50	121	520
									10,50	137	588

CLASSIFY YOURSELF

DETERMINING YOUR SKIER TYPE IS YOUR RESPONSIBILITY!

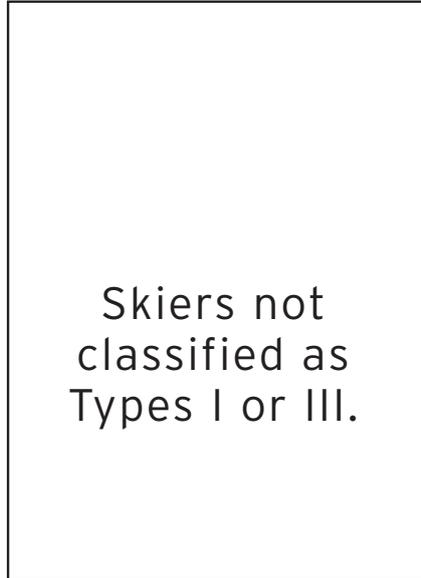
Your Skier Type, height, weight, age and boot sole length are used by the shop technician to determine the release/ retention settings for your bindings. Consult these descriptions to select your classification. Be sure to provide accurate information. Errors increase your risk of injury.



TYPE I

Cautious skiing on smooth slopes of gentle to moderate pitch.

Skiers who designate themselves as Type I receive lower than average release/retention settings. This corresponds to an increased risk of inadvertent binding release in order to gain releasability in a fall. This type also applies to entry level skiers uncertain of their classification.



TYPE II

Skiers who designate themselves as Type II receive average release/ retention settings appropriate for most recreational skiing.



TYPE III

Fast skiing on slopes of moderate to steep pitch.

Skiers who designate themselves as Type III receive higher than average release/ retention settings. This corresponds to decreased releas-ability in a fall in order to gain a decreased risk of inadvertent binding release. Type III settings should not be used by skiers of less than 22 kg/48 lbs.

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

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.

										Mz (Nm)	My (Nm)	
		SINGLE CODE										
		SKIER CODE	a-i	j-n	o-s/B	t/C-G	H-L	M-Q	R-V	V-6		
kg (lbs)	cm (ft in ^{''})		≤230	231-250	251-270	271-290	291-310	311-330	331-350	≥351	5	18
10-13 kg (22-29 lbs)		A	0,75	0,75	0,75						8	29
14-17 kg (30-38 lbs)		B	1,00	0,75	0,75	0,75					11	40
18-21 kg (39-47 lbs)		C	1,50	1,25	1,25	1,00					14	52
22-25 kg (48-56 lbs)		D	2,00	1,75	1,50	1,50	1,25				17	64
26-30 kg (57-66 lbs)		E	2,50	2,25	2,00	1,75	1,50	1,50			20	75
31-35 kg (67-78 lbs)		F	3,00	2,75	2,50	2,25	2,00	1,75	1,75		23	87
36-41 kg (79-91 lbs)		G		3,50	3,00	2,75	2,50	2,25	2,00		27	102
42-48 kg (92-107 lbs)	≤ 148 cm (≥ 4'10 ^{''})	H			3,50	3,00	3,00	2,75	2,50		31	120
49-57 kg (108-125 lbs)	149-157 cm (4'11 ^{''} -5'1 ^{''})	I			4,50	4,00	3,50	3,50	3,00		37	141
58-66 kg (126-147 lbs)	158-166 cm (5'2 ^{''} -5'5 ^{''})	J			5,50	5,00	4,50	4,00	3,50	3,00	43	165
67-78 kg (148-174 lbs)	167-178 cm (5'6 ^{''} -5'10 ^{''})	K			6,50	6,00	5,50	5,00	4,50	4,00	50	194
79-94 kg (175-209 lbs)	179-194 cm (5'11 ^{''} -6'4 ^{''})	L			7,50	7,00	6,50	6,00	5,50	5,00	58	229
≤ 95 kg (≥ 210 lbs)	≤ 195 cm (≥ 6'5 ^{''})	M				8,50	8,00	7,00	6,50	6,00	67	271
		N				10,00	9,50	8,50	8,00	7,50	78	320
		O				11,50	11,00	10,00	9,50	9,00	91	380
		P						12,00	11,00	10,50	105	452
											121	520
											137	588

HOW TO USE THE RELEASE/ RETENTION ADJUSTMENT TABLE:

- 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.
- 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.
 - 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.
- Find the column that corresponds to the skier's boot sole measurement in millimeters.
- 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.
- 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. Exercise that binding by release it at least once in all direction.
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 solesNo 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.

TYPE I SKIERS

- Cautious skiing on smooth slopes of gentle to moderate pitch.

Skiers who designate themselves as Type I receive lower than average release/retention settings. This corresponds to an increased risk of inadvertent binding release in order to gain releasability in a fall. This type also applies to entry level skiers uncertain of their classification.

TYPE II SKIERS

- Skiers not classified as Type I or Type III.

Skiers who designate themselves as Type II receive average release/retention settings appropriate for most recreational skiing.

TYPE III SKIERS

- Fast skiing on slopes of moderate to steep pitch.

Type III settings should not be used by skiers of less than 22 kg/48 lbs. Skiers who designate themselves as Type III receive higher than average release/retention settings. This corresponds to decreased releasability in a fall in order to gain a decreased risk of inadvertent binding release.

NOTE:

If the skier reports release/retention problems see the chapter "trouble shooting release/retention problems", page 73 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.

TROUBLE SHOOTING RELEASE/RETENTION PROBLEMS

IF THE SKIER REPORTS A RELEASE OR 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, designating skier type classifications that are different for twist and forward lean, or request discretionary release/retention settings that are higher or lower than the normal range.
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.

HEAD/TYROLIA CERTIFICATION REQUIREMENTS

This section must be read, and thoroughly understood, prior to completion of HEAD/TYROLIA's Employee Training Documentation Form and viewing the 2011.12 HEAD/TYROLIA Certification Video.

At TYROLIA 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 HEAD/TYROLIA 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 HEAD/TYROLIA 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, function checking, and maintaining HEAD/TYROLIA 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 HEAD/TYROLIA Authorized Retailer Agreement on file with HEAD USA / HEAD CANADA INC.
- A current HEAD/TYROLIA Binding Indemnification Agreement on file with HEAD USA / HEAD CANADA INC.
- At least one HEAD/TYROLIA Certified Technician employed per location.
- The required equipment for installing and testing HEAD/TYROLIA bindings. All Agreements and Certifications must be valid for the current season.

REQUIRED SERVICE SHOP TOOLS

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

- Tape Measure
- HEAD/TYROLIA Templates
 - Drill template 92 W or 92 FAT (Blue)
 - Drill template 94 W (Violet)
 - Drill template LITERAIL & KID PLATE (Green)
 - Drill template BASES & PLATES (Grey)
 - Drill template RACEPLATE 09 (Black)
 - Drill template SP 2003 W or SP 2003 FAT (Red)
 - Drill template SR 2003 W (Yellow)
- Variable speed, reversible electric drill

- HEAD/TYROLIA Step Drill Bits (or equivalent)
 - 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
- HEAD/TYROLIA Pozidrive No. 3 screwdriver (or equivalent)
- HEAD/TYROLIA large slot screwdriver
- Current HEAD/TYROLIA retention/release adjustment table
- Approved mechanical testing device
- Screw extractor
- Tap extractor
- Hole plugs, plastic & wood
- HEAD/TYROLIA 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 US and Canada under the "HEAD/TYROLIA 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.
- Under no circumstances should you make any warranties or assertions about the customers 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 need be.
 - 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 HEAD/TYROLIA Limited Warranty.
- Recommend care in transport: heels closed, bindings covered.
- Recommend care in storage: dry, moderate temperature, heels closed, 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 HEAD/TYROLIA 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 HEAD/TYROLIA 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 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 HEAD/TYROLIA 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 HEAD/TYROLIA 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 a HEAD/TYROLIA certified technician once each 15-20 days of skiing, or annually, whichever comes first.

HEAD/TYROLIA RETAILER INDEMNITY PROGRAM

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

Under the plan, HEAD/TYROLIA will defend and indemnify the Authorized Retailer in bodily injury claims when certain conditions are met, including following all HEAD/TYROLIA 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 HEAD/TYROLIA Retailer Indemnity Program, complete requirements are listed in the current HEAD/TYROLIA 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, a tech video and technical seminars are presented by HEAD/TYROLIA to help define appropriate shop procedures.

It is the responsibility of the HEAD/TYROLIA Authorized Retailer to see that all technical and product information materials provided by HEAD USA / HEAD CANADA INC. are ordered and available in their shop.

This should be done with the aid of your HEAD/TYROLIA Representative while placing your TYROLIA pre-season binding order.

THE HEAD/TYROLIA RETAILER INDEMNITY PROGRAM APPLIES ONLY TO THE FOLLOWING BINDINGS:

HEAD:

COMPETITION

FREEFLEX PRO 20 (X) RD, FREEFLEX PRO 20 (X) RS, FREEFLEX PRO 18 (X) Sale, FREEFLEX PRO 16 (X) RD

RACING

GTO 15, FREEFLEX PRO 16, FREEFLEX PRO 14, FREEFLEX PRO 12, FREEFLEX PRO 11, FREEFLEX PLUS 17, FREEFLEX PLUS 14, FREEFLEX PLUS 11

PARK & POWDER

MOJO 20 (X), MOJO 18 (X), MOJO 15, MOJO 12, MOJO 11, MOJO 7.5

SYSTEMS

PRD 14, PRD 12, PR 11, POWER 14 D, POWER 12 D, POWER 11, LR 7.5, LR 4.5, RFD 14, RFD 14 DEMO, RFD 12, RFD 11 DEMO, RF 11, RFL 7.5, RFL 4.5

LIGHT DIAGONAL & SUPERLIGHT

LX 12, SX 10, LD 12 CYBER, LD 12, SL 110 ABS, SL 100

WOMEN

MYA 12 PRD, MYA 10 PR, MYA 9 LR, ONE POWER 12 D, ONE RF 11, ONE LR 10, ONE RF 9, ONE LR 9, ONE LD 12, ONE SL 90, GOLD THANG 12 LD, SURE THANG 9 RF, LITE THANG 9 RFL

JUNIOR

SL 90 ABS JR RACE, SL 75 ABS, SL 75, SL 70 AC, SL 45

TYROLIA:

COMPETITION

FREEFLEX PRO 18 (X) Sale, FREEFLEX PLUS 20 (X) RD, FREEFLEX PLUS 20 (X) RS, FREEFLEX PLUS 16 (X) RD, FREEFLEX PLUS 15 (X) RD

RACING

FREEFLEX PRO 17, FREEFLEX PRO 15, FREEFLEX PRO 14, FREEFLEX PRO 11, FREEFLEX PLUS 17, FREEFLEX PLUS 15, FREEFLEX PLUS 14, FREEFLEX PLUS 11

PARK & POWDER

PEAK 18 (X), PEAK 15, PEAK 12, PEAK 11, PEAK 7.0 AC, MOJO 20 (X), MOJO 15, MOJO 11, MOJO 7

SYSTEMS

POWER 12 D, POWER 11 D, PR 10, POWER 10, LR 10, LR 9, LR 7.5, LR 7.0 AC, LR 4.5, RFD 14, RFD 14 DEMO, RFD 12, RFD 11, RFD 11 DEMO, RF 11, RF 10, HD 14 FREEFLEX, HD 14 FREEFLEX DEMO, LD 12 RAILFLEX, LD 10 RAILFLEX, SLD 11 RAILFLEX, SLD 11 RAILFLEX DEMO, SL 11 RAILFLEX, SL 10 RAILFLEX, RFL 9, RFL 7.5, RFL 7, RFL 4.5, SL 9 RAILFLEX LITE, SL 7 RAILFLEX LITE, SL 4.5 RAILFLEX LITE

LIGHT DIAGONAL

LD 12 CYBER, LD 12, LD 12 S, SLD 11 ABS

SUPER LIGHT

SX 10, SL 110 CARVE ABS, SL 100 CARVE ABS, SL 100 CARVE, SL 110 S ABS, SL 110 ABS, SL 110, SL 100 ABS, SL 100

WOMEN

RF 9 W, RFL 9 W, SLW 9 RAILFLEX, SLW 90 ABS

JUNIOR

FREEFLEX JUNIOR RACE 11, SL 70 CARVE ABS, SL 70 ABS, SL 70, SL 70 AC, SL 45

RENTAL

SP 130 ABS DEMO AERO, SP 120 ABS, SP 100 ABS, SP 90 ABS, SP 75 ABS, SP 70 ABS, SP 45, SR 100, SR 70, SR 45, SRL 100, BYS 100, BYS 100 B, BYS 100 Y, BYS 100 S, BYS 75 JUNIOR, B²YS 45

TYROLIA INSIDE:

4FRNT

DEADBOLT 18, DEADBOLT 15, DEADBOLT 13 DEMO, DEADBOLT 13, DEADBOLT 12, PADLOCK 11, PADLOCK 7

AMPLID

AMPLID ONE 8, AMPLID FTF, AMPLID DZN

KESSLER

FREEFLEX PRO 14 KESSLER, PRD 11 KESSLER

KNEISSL

POWER 12 D, POWER 10, RFD 12, RF 10

LIBERTY

LIBERTY 15

PALMER

PALMER 12

ZAG

QZ 14

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. Completed Retailer Agreements, Indemnification Agreements and Employee Training Documentation Forms should be received at HEAD USA INC. / HEAD CANADA INC. no later than December 31, 2011.

An administrative fee of \$15 Cdn per year for each Certified Mechanic (maximum \$75 Cdn per location) will be charged by TYROLIA in Canada and \$30 US per location in the USA. If a retailer loses his only TYROLIA Certified Mechanic, he must notify HEAD USA INC. / HEAD CANADA INC. 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 HEAD/TYROLIA Authorized Retailer Agreement and the HEAD/TYROLIA Bindings Indemnification Agreement must be on file with HEAD USA INC. / HEAD CANADA INC.
- The shop must adhere to 2011.12 HEAD/TYROLIA procedures for selection, mounting, adjusting, testing and/or servicing of system components as detailed in this manual.
- The actual HEAD/TYROLIA retention/release adjustment, or its equivalent, must be used.
- A HEAD/TYROLIA 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 were 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

TYROLIA Retail/Rental Workshop tickets have proven their importance in the legal system, and we strongly recommend their use (see elsewhere in this manual). 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, boot sole 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 HEAD/TYROLIA 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 HEAD/TYROLIA 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 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 offered by HEAD/TYROLIA.
- AGREEMENT that instruction in the use of the equipment has been received, that the skier height, weight, skier type, age, boot sole 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 HEAD/TYROLIA Certified Mechanic are required by the HEAD/TYROLIA Retailer Indemnity Program.

NOTE:

- Any changes in documentation requirements must be authorized in writing by HEAD USA INC. / HEAD CANADA INC.

POST ACCIDENT REPORT (SEE SAMPLE IN APPENDIX).

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 HEAD USA INC. / HEAD CANADA INC. 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 HEAD USA INC. / HEAD CANADA INC. 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. (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:

HEAD/TYROLIA reserves the right to deny indemnity if HEAD/TYROLIA requirements are not fulfilled. Strict compliance by the dealer with all requirements, as stated in the HEAD/TYROLIA 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 HEAD/TYROLIA Binding Indemnification Program are contained in your HEAD/TYROLIA Binding Indemnification Agreement.

THE HEAD/TYROLIA LIMITED WARRANTY

HEAD/TYROLIA bindings are warranted to be free from defects in materials and workmanship for a period of four years from date of purchase or five years from date of manufacture, whichever period expires earlier.

For rental bindings it is 2 years from date of purchase.

HEAD/TYROLIA disclaims all other warranties express or implied (USA and Canada).

Buyer's sole remedy under the above warranty or under any implied warranty is limited to the repair or replacement, at HEAD/TYROLIA's sole option, of subject product or parts thereof. Buyer should return the subject product or parts to the place of purchase for warranty service.

This limited warranty applies only to products that have been subject to normal use and that have been properly serviced.

It excludes parts subject to wear such as AFD's, brakes, windows, plastic or metal tracks, etc. The "Instructions for Use" booklet (warranty), proof of purchase and proof of periodic service must accompany all bindings returned for replacement consideration.

LIMITATION OF LIABILITY

In no event shall HEAD/TYROLIA be liable for incidental, consequential statutory or exemplary damages, whether the action is in contract, warranty, negligence or strict liability, including without limitation, loss to property other than the binding, loss of use of the binding or other property, or other economic losses. HEAD/TYROLIA shall not be liable for contribution or indemnification, whatever the cause. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Some states do not allow the exclusion of limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

SERVICE UNDER THE HEAD/TYROLIA 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 HEAD/TYROLIA 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 HEAD/TYROLIA 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 HEAD/TYROLIA 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 HEAD/TYROLIA 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 HEAD/TYROLIA distributor due to inappropriate release values (i.e. values which fall outside the "In-Use" tolerance range on the current HEAD/TYROLIA 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:

HEAD USA INC.

Shore Pointe, 1 Selleck St.
Norwalk, CT 06855

USA

Phone: 800-874-3235

203-855-8666

Fax: 203-855-5719

www.tyrolia.com

HEAD CANADA INC.

P.O. Box 3620, Station Main
Guelph, Ontario N1H 7H1

Canada

Phone: 800-265-7257

519-822-1576

Fax: 519-822-2202

www.tyrolia.com

RISK MANAGEMENT

Indemnification, Insurance, and your liabilities.

INDEMNIFICATION

Indemnification simply means that someone agrees to reimburse you for certain costs. In the ski industry it normally means that provided you fully follow the manufacturer's requirements and install and adjust the binding system correctly, the manufacturer or distributor will provide a defense and pay any judgment which may be entered against you if you are the subject of a claim or suit 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 that you did your job properly in order to qualify. 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 warranties that extend beyond those made by HEAD/TYROLIA. 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 PROCEDURE 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.

HEAD/TYROLIA has been the leader in molding valuable risk management concepts into a program that virtually the entire ski industry follows today. HEAD/TYROLIA 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 HEAD/TYROLIA RETAILER INDEMNITY PROGRAM

Selecting equipment for your customer.

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

BINDINGS 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 re-writing 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 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 skiers can do to protect their well being.

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.

RACING (X) BINDINGS

Certain binding models are produced by HEAD/TYROLIA each year for the exclusive use of qualified competitors under the supervision of HEAD/TYROLIA Technical Specialists. These bindings are not covered by either the HEAD/TYROLIA Warranty or any Dealer Indemnity Program. We recommend you decline to service them, and warn against their use.

In a similar vein some skiers may wish to use retention settings which are excessive. DIN settings over 10 do not satisfy current industry standards and should not be used. Adjustments exceeding this range are made on one's own risk.

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 HEAD/TYROLIA'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 a HEAD/TYROLIA 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 HEAD/TYROLIA 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 HEAD/TYROLIA procedures for inspection, mounting, adjustment and maintenance as appropriate.
- Confirm that toe and heel indicator values match those specified on the actual HEAD/TYROLIA 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 counter-clockwise 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 HEAD/TYROLIA 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 HEAD/TYROLIA 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 RECORD

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, and is likely to stay put - Moms are good. This can be invaluable if you need the technician 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 to either an adult or a child, keep the original form in a safe place until the case is 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 rules and you will have very few problems.

USE OF NON-RECOMMENDED SETTINGS

SKIERS REQUESTING SETTINGS NOT RECOMMENDED BY HEAD/TYROLIA

The 2011.12 HEAD/TYROLIA Release/Retention Adjustment Table is the only adjustment chart recommended for use by HEAD/TYROLIA dealers during the 2011.12 season.

Some skiers may request settings different from those in the HEAD/TYROLIA 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 HEAD/TYROLIA Release/Retention Adjustment Table.

HEAD/TYROLIA 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. HEAD/TYROLIA recognizes a skier's right to choose other settings, but if the skier requests settings outside of those derived from the normal procedures for re-classifying skier type and for troubleshooting, the shop may either:

1. Adjust the system to the setting derived from HEAD/TYROLIA 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 reason the higher or lower setting was requested. Do not in any case adjust the system to a release/retention value higher than the maximum acceptable setting at the bottom of the HEAD/TYROLIA Release/Retention Adjustment Table. 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. The skier must also read and sign a 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 signed warning, release and indemnity agreement are attached to the completed workshop or rental form.

Warning, Release and Indemnity Agreement

I, _____, 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 hereby waive and release all claims arising from the use of the bindings and release from all liability the shop, the distributor and the manufacturer, their agents and employees, and I further agree to indemnify them from any and all liability or harm or damage of any kind whatsoever which may result from the use of these bindings by myself or anyone I allow to use the bindings.

I, the undersigned, have read and understand this liability release agreement, and agree that it is binding upon me, my heirs, 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



POST ACCIDENT INSPECTION REPORT

Date of Accident _____ Workshop Ticket # _____
 Skier Name _____ Skier Phone _____
 Address _____ Witness Name _____
 City, State Zip _____ 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	_____
Binding Brand	_____	Model	_____	Size	_____

Condition of System

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

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 _____

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

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For more information log on to check-itout.com

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.



TYPE III

Fast skiing on slopes of moderate to steep pitch.

Skiers not classified as Types I or III.

TYPE II

Skiers who designate themselves as Type I receive lower than average release/retention settings. This corresponds to an increased risk of inadvertent binding release in order to gain releasability in a fall. This type also applies to entry level skiers uncertain of their classification.

Skiers who designate themselves as Type II receive average release/retention settings appropriate for most recreational skiing.

Skiers who designate themselves as Type III receive higher than average release/retention settings. This corresponds to decreased releas-ability in a fall in order to gain a decreased risk of inadvertent binding release. Type III settings should not be used by skiers of less than 22 kg/48 lbs.



92 W
Art.Nr.:162760

92 FAT
Art.Nr.:162868

HEAD
FREEFLEX PRO 20 X RD, FREEFLEX PRO 20 X RS, FREEFLEX PRO 18 X Sale, FREEFLEX PRO 16 X RD, FREEFLEX PRO 16,
FREEFLEX PRO 14, FREEFLEX PRO 11, GTO 15, MOJO 18 X, MOJO 15, MOJO 12, MOJO 11, MOJO 7.5, LX 12 WIDE 88, SX 10,
SL 90 ABS JR RACE, SL 75

TYROLIA
FREEFLEX PRO 17, FREEFLEX PRO 14, FREEFLEX PRO 11, PEAK 18 X T. H., PEAK 15 T. H., PEAK 15, PEAK 12, PEAK 11,
PEAK 7.0 AC, LD 12, SX 10, SL 100, SL 70 AC

TYROLIA INSIDE
AMPLID: AMPLID FTF, AMPLID DZN 4FRNT: DEADBOLT 18, DEADBOLT 15, DEADBOLT 13, PADLOCK 11, PADLOCK 7
KESSLER: FREEFLEX PRO 14 LIBERTY: LIBERTY 15 SP 2000: SL 70 AC V3TEC ZAG: QZ 14 FAT 115

94 W
Art.Nr.:162761

HEAD
SL 45

TYROLIA
SL 45

**BASES
&
PLATES**
Art.Nr.:162865

HEAD
POWERRAIL PRO BASE, POWERRAIL BASE, SPEEDPLATE PLUS 13, ULTRAFLEX PLATE 9, POWER PLATE 9, LITERAIL M,
KID PLATE 7 LONG

TYROLIA
POWERRAIL PRO BASE, POWERRAIL BASE, SPEEDPLATE PLUS 13, ULTRAFLEX PLATE 9, POWER PLATE 9, LITERAIL M,
KID PLATE 7 LONG

TYROLIA INSIDE
KESSLER: POWERRAIL PRO BASE, POWERRAIL BASE

**LITERAIL
&
KID PLATE 7**
Art.Nr.:162903

HEAD
LITERAIL L, M, S

TYROLIA
LITERAIL L, M, S, KID PLATE 7 LONG, KID PLATE 7 SHORT

**RACE
PLATE 09**
Art.Nr.:162902

HEAD
RACEPLATE RDX, RACEPLATE JUNIOR

TYROLIA
RACEPLATE RDX, RACEPLATE JUNIOR

SP 2003 W
Art.Nr.:162763

SP 2003 FAT
Art.Nr.:162879

TYROLIA
SP 130 ABS DEMO AERO, SP 120 ABS, SP 100 ABS, SP 75 ABS, SP 45

TYROLIA INSIDE
4FRNT: DEADPOLT 13 DEMO

SR 2003
Art.Nr.:162762

TYROLIA
SR 100, SR 45

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.

										Mz (Nm)	My (Nm)		
		SINGLE CODE											
 kg (lbs)	 cm (ft "in")	SKIER CODE	a-i	j-n	o-s/B	t/C-G	H-L	M-Q	R-V	V-6			
			≤230	231-250	251-270	271-290	291-310	311-330	331-350	≥351	5	18	
10-13 kg (22-29 lbs)		A	0,75	0,75	0,75						8	29	
14-17 kg (30-38 lbs)		B	1,00	0,75	0,75	0,75					11	40	
18-21 kg (39-47 lbs)		C	1,50	1,25	1,25	1,00					14	52	
22-25 kg (48-56 lbs)		D	2,00	1,75	1,50	1,50	1,25				17	64	
26-30 kg (57-66 lbs)		E	2,50	2,25	2,00	1,75	1,50	1,50			20	75	
31-35 kg (67-78 lbs)		F	3,00	2,75	2,50	2,25	2,00	1,75	1,75		23	87	
36-41 kg (79-91 lbs)		G		3,50	3,00	2,75	2,50	2,25	2,00		27	102	
42-48 kg (92-107 lbs)	≤ 148 cm (≥ 4'10")	H			3,50	3,00	3,00	2,75	2,50		31	120	
49-57 kg (108-125 lbs)	149-157 cm (4'11"-5'1")	I			4,50	4,00	3,50	3,50	3,00		37	141	
58-66 kg (126-147 lbs)	158-166 cm (5'2"-5'5")	J			5,50	5,00	4,50	4,00	3,50	3,00	43	165	
67-78 kg (148-174 lbs)	167-178 cm (5'6"-5'10")	K			6,50	6,00	5,50	5,00	4,50	4,00	50	194	
79-94 kg (175-209 lbs)	179-194 cm (5'11"-6'4")	L			7,50	7,00	6,50	6,00	5,50	5,00	58	229	
≤ 95 kg (≥ 210 lbs)	≤ 195 cm (≥ 6'5")	M				8,50	8,00	7,00	6,50	6,00	67	271	
		N					10,00	9,50	8,50	8,00	7,50	78	320
		O						11,50	11,00	10,00	9,50	91	380
		P							12,00	11,00	10,50	105	452
											121	520	
											137	588	

HOW TO USE THE RELEASE/ RETENTION ADJUSTMENT TABLE:

- 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.
 - a. 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.
 - b. 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.
 - Find the column that corresponds to the skier's boot sole measurement in millimeters.
 - 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.
 - This value should be recorded on the workshop form under Initial Indicator Settings.
- #### MECHANICAL SYSTEM TESTING
- Adjust the bindings toe and heel indicators to the Initial Indicator Setting.
 - Use a calibrated torque measuring device according to the instructions provided by the supplier.
 - Exercise that binding by release it at least once in all direction.
 - Three tests are required in each direction. The middle quantitative value of the three releases should be used as the test result.
 - Using the previously determined Skier Code slide across the chart to the column representing twist torque reference values.
 - 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.
 - 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.
 - If the test result value falls out of the In-Use Range the system should be thoroughly inspected for the following:
 - Correct forward pressure
 - Correct Sole-hold down adjustment
 - Worn or contaminated AFD's
 - Out of standard boot soles
 No work can be performed on the system until these problems are corrected.
 - Check the heel for forward lean the same way, determining the middle quantitative value of three vertical releases. Adjust if necessary.
 - Record final indicator settings on the workshop form in the area for final release/retention settings.
- #### TYPE I SKIERS
- Cautious skiing on smooth slopes of gentle to moderate pitch.
- Skiers who designate themselves as Type I receive lower than average release/retention settings. This corresponds to an increased risk of inadvertent binding release in order to gain releasability in a fall. This type also applies to entry level skiers uncertain of their classification.
- #### TYPE II SKIERS
- Skiers not classified as Type I or Type III.
- Skiers who designate themselves as Type II receive average release/retention settings appropriate for most recreational skiing.
- #### TYPE III SKIERS
- Fast skiing on slopes of moderate to steep pitch.
- Type III settings should not be used by skiers of less than 22 kg/48 lbs. Skiers who designate themselves as Type III receive higher than average release/retention settings. This corresponds to decreased releasability in a fall in order to gain a decreased risk of inadvertent binding release.

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