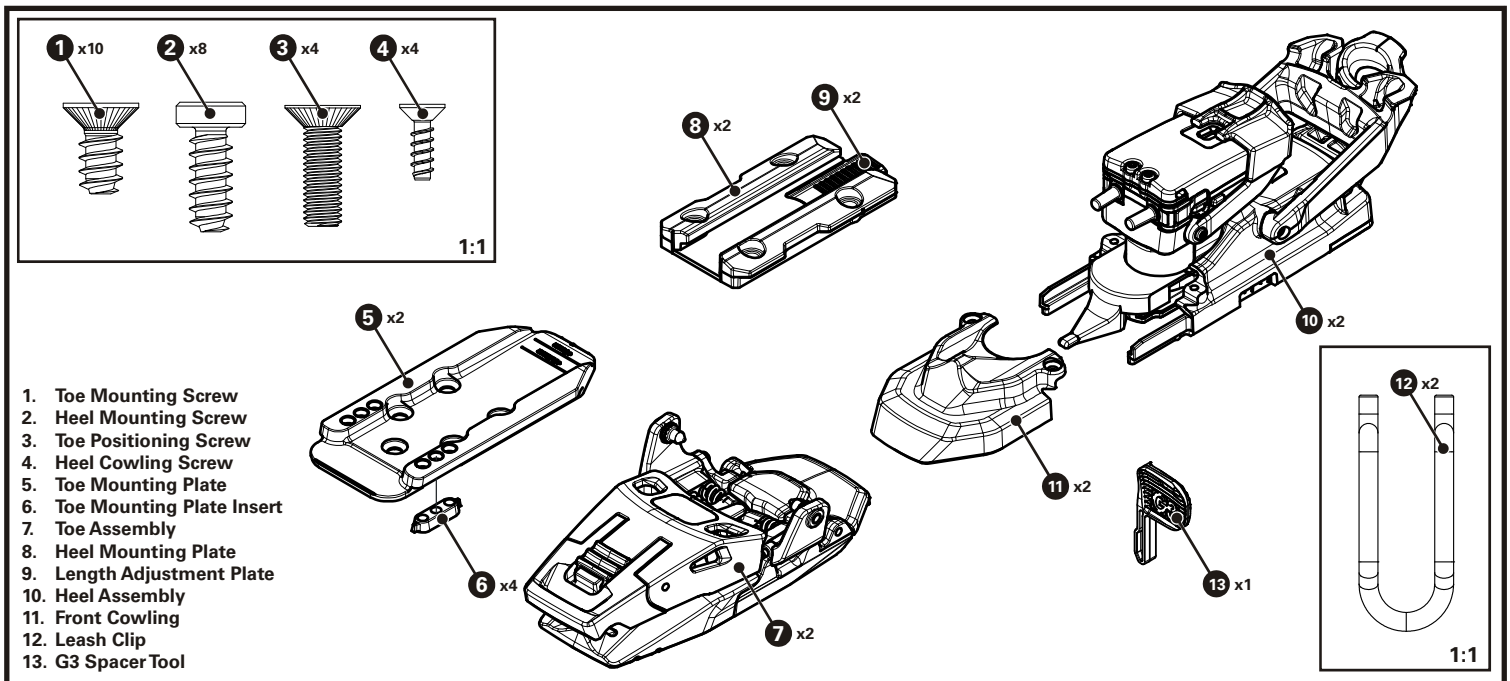




## Mounting and Installation Instructions

1356-3000



### 1. Notes

- The installation of the binding should only be performed by an authorized G3 dealer
- The G3 ONYX and RUBY bindings are compatible only with alpine touring ski-boots (ISO 9523) with TECH compatible inserts
- Bellowed touring boots, such as the **Scarpa® F1, F3** and **Terminator X** series boots, can only be used with the ONYX bellowed boot shim installed. The shim is available as an accessory item from G3.



**Warning: Using a bellowed boot with the G3 ONYX or RUBY binding will affect the safety release of the boot from the binding. G3 cannot guarantee the release settings of the binding when used with these boots. Refer to the instructions included with the ONYX bellowed boot shim for further details.**

### 2. Mounting and Installation

- Inspect the ski and binding for any visual signs of damage or wear. Replace any worn or damaged parts.

#### 2.1. Mounting

- Always follow the ski manufacturer's recommendation for binding mounting location to ensure that the binding is mounted in the correct binding mounting area on the ski.
- The G3 ONYX/RUBY binding mounting pattern is compatible with Dynafit® binding patterns. Use a G3 ONYX mounting jig, or Dynafit® compatible jig to locate and drill holes in the ski.
- The G3 ONYX/RUBY is designed to mount to skis with drilled hole sizes from ø3.5mm to ø4.1mm x 9mm. For skis with a metal topsheets, use a tap and follow the ski manufacturer's recommendation for ideal drill size.
- Set the jig to the boot sole size either by fitting the boot to the jig, or by setting the jig length to match the desired sole length. Table 3, "ONYX/RUBY Mounting Guide," at the end of this document can be used to determine the sole length range available for adjustment given a chosen mount size set by the jig.

- Place the jig on the ski and align the center mark of the jig to the center mark of the ski. If the ski does not have a center mark, either:
  - a) use the ski manufacturer's recommended measurement to locate the center mark
  - b) locate the cord center of the ski and mark it. Align the jig such that boot toe is aligned to this mark.
- Fix the jig in place and drill the holes using the recommended drill size; either **ø3.5 mm x 9 mm** or **ø4.1 mm x 9 mm**. (4.1 mm for skis with metal topsheet)
- Remove chips or dust from the holes. Holes should be glued with waterproof glue and/or tapped if recommended by the ski manufacturer.

#### 2.2. Installation of Mounting Plates

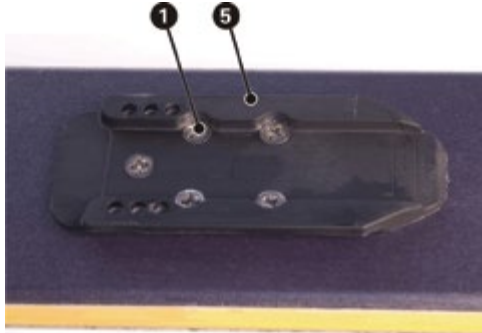
- **NOTE: Always use G3 ONYX or RUBY mounting screws supplied with the binding.** If the screws have become stripped or damaged, replace only with G3 ONYX mounting screws. Using incompatible screws will likely result in damage to the binding or

ski, and possible separation of the binding from the ski.

- Ensure the toe mounting plate inserts (6) are installed in the toe mounting plate before the plate is mounted to the ski



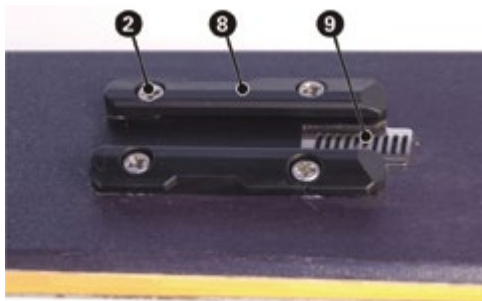
- Place the toe mounting plate (5) on the ski as shown. Ensure the mounting plate is aligned properly to the mid line of the ski and is flush to the ski top sheet. Install the five toe mounting screws (1) and torque to **4 Nm** using a #3 Pozidrive driver.



- Ensure the length adjustment plate (9) is installed in the heel mounting plate before the plate is mounted to the ski.



- Mount the heel mounting plate (8) on the ski as shown. Install the four heel mounting screws (2). Ensure the heel plate sits flush on the ski top sheet. Check that the metal length adjustment plate is installed against the ski. Torque the mounting screws to **4 Nm** using a #3 Pozidrive driver.



### 2.3. Installation of the Leash Attachment Clip

- **NOTE** The ski leash clip should be installed on any binding that does not have a ski brake installed.
- The toe piece must be off the ski to be able to install the clip.
- The leash clip can be installed on either the left or right side of the toe piece.

- Insert ends of the clip (12) into the holes on the underside of the toe piece.
- Fold the clip flush with the underside of the binding.

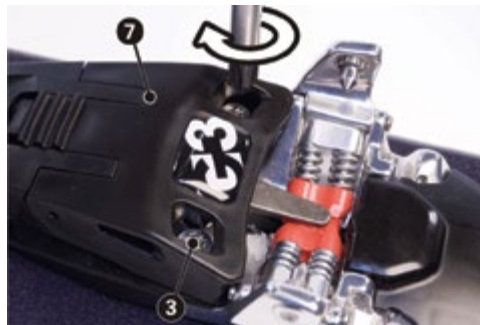


### 2.4. Toe Installation

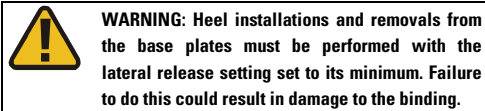
- Slide the toe assembly (7) backwards onto the toe mounting plate (5) from the front/tip end of the toe mounting plate, and align the back edge of the toe assembly with the 0 mm mark on the mounting plate.



- Install the two toe positioning screws (3) using a #3 Pozidrive screwdriver and torque to **5.6 Nm**. *Note: the toe position can be moved in two 7.5mm increments to adjust the boot position on the ski and accommodate larger or smaller boot sizes.*



### 2.5. Heel Installation



**WARNING: Heel installations and removals from the base plates must be performed with the lateral release setting set to its minimum. Failure to do this could result in damage to the binding.**

- Slide the heel assembly (10) forwards onto the heel mounting plate (8) from the rear/tail end of the heel mounting plate until it makes contact with the length adjustment plate (9) and is approximately in the position shown.



- While pushing slightly forward on the heel and turning the length adjustment screw clockwise with a #3 Pozidrive screwdriver, adjust the position of the heel until it is approximately in the centre of its adjustment range, as shown by the position indicator.



- If you are **not** installing the ONYX or RUBY Ski Brake; install the front cowling (11) by sliding it on from the front/tip of the heel mounting plate (8) and installing the heel cowling screws (4) into the heel with either a #1 phillips or a #1 Pozidrive screwdriver and torque them to **1.1 Nm**.



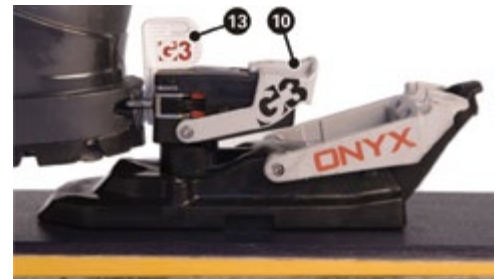
- If you are installing the ONYX or RUBY Ski Brake, refer to the installations instructions included with the brake.

### 2.6. Heel Location Setting



**WARNING: Binding performance is sensitive to accurately setting the heel location. Too large a gap could result in the binding releasing too easily; too small a gap will affect release values and can cause interference between the boot and binding while touring. It is very important to have a 6mm gap between the boot heel and the binding after installation.**

- Install a ski boot into the binding with the heel positioned in ski mode.
- Use the supplied 6mm G3 spacer tool (13) to set the gap between the binding and boot. The shim should fit snugly between the binding and the boot. Use a #3 Pozidrive screwdriver to adjust the boot length adjustment screw **Note: Do not over tighten the boot length adjustment screw.**



### 3. Release Value Adjustment

- The G3 ONYX/RUBY binding has two release modes: lateral twisting ( $M_L$ ), and forward falling ( $M_F$ ). Your G3 ONYX or RUBY binding has a lateral twist ( $M_L$ ) release setting scale from 6-12, and a forward falling ( $M_F$ ) release setting scale from 5-10. Please choose an appropriate value using the selection of release values chart provided in Table 2. (In accordance with ISO 11088/ ASTM F939).

#### 3.1. Setting of Lateral ( $M_L$ ) Release

- NOTE The heel tour mode lever must be in ski mode in order to set  $M_L$  release.**
- $M_L$  (twisting) DIN adjustment is located on the main heel body, above the boot length adjustment screw. Using a Pozidrive #3 screwdriver, turn adjuster clockwise to increase release setting, and counter clockwise to decrease setting.



#### 3.2. Setting of Forward Falling ( $M_F$ ) Release

- $M_F$  (forward falling) DIN adjustment is located on the upper part of the heel. Using a Pozidrive #3, turn adjuster clockwise to increase release setting, and counter clockwise to decrease setting.





### 4. Selection of Release Setting Values (ISO 11088/ ASTM F939)

#### 4.1. Determination of Skier Type

- It is the responsibility of the skier to determine his/her skier-type classification as defined in Table 1

**Table 1 – Determination of Skier-type Classification**

 <p><b>Type 1</b></p> <p><i>Cautious skiing on smooth slopes of gentle to moderate pitch</i></p>	<p>Skiers that do not meet the descriptions of either 1 or 3</p> <p><b>Type 2</b></p>	 <p><b>Type 3</b></p> <p><i>Fast skiing on slopes of moderate to steep pitch.</i></p>
<p>Skiers who designate themselves as Type 1 receive lower than average release settings. This corresponds to an increased risk of inadvertent binding release in a fall. This type also applies to entry level skiers uncertain of their skill level.</p>	<p>Skiers who designate themselves as Type 2 receive average release settings appropriate for most recreational skiing.</p>	<p>Skiers who designate themselves as Type 3 receive higher than average release settings. This corresponds to decreased capacity for release in a fall, in order to gain a decreased risk of inadvertent binding release.</p>

- Skiers 10 years of age or older of any type who desire a higher or lower setting than the setting of their skier type according to Table 1, may do so in the following cases:
- Skiers who have satisfactory experience with lower settings regarding these recommendations may request setting based on their experience.
- Skiers who have satisfactory experience without inadvertent releases may request a setting up to 15% lower than that recommended in Table 2
- Skiers having certain characteristics, such as neutral skiing technique, defensive attitude, high degree of control, etc. may request a setting of 15% lower than that recommended in Table 2.
- Skiers who have experienced inadvertent releases may request a setting up to 15% higher than that recommended in Table 2.
- Skiers may request settings that are different for lateral twist and forward lean.
- If a skier selects a different skier type for forward lean, record the choice with a (/) separating the two types, in the order lateral twist/forward lean (LT/FL)
- If a skier selects discretionary settings lower than those derived from Type 1, record this selection with a (-) symbol. For example Type 1-
- If a skier selects discretionary settings higher than those derived from Type 3, record this selection with a (+) symbol. For example Type 3+

#### 4.2. Selection of Release Settings

- Locate the skier's weight (mass) and height in the appropriate column in Table 2. If weight and height are not on the same line, select the line closest to the top of the table.
- Adjustment for skier type (see 4.1):
  - For a **Type 1** skier, stay on the line and use that skier code.
  - For a **Type 2** skier, move down the table one skier code.
  - For a **Type 3** skier, move down the table two skier codes.
  - If the skier is age 9 and younger, or 50 and older, move up the table one skier code.
- If separate lateral twist ( $M_L$ ) and forward lean ( $M_F$ ) skier types were selected, repeat the selection of release settings above for the second skier type, record the resulting codes in the order LT/FL.

#### 4.3. Release Value Determination

- Locate the release value at the intersection of the skier code row and the appropriate boot sole length. If there is a blank box, move left or right to the in same row to the next value.
- Note that release values selected using this practice may not be appropriate for circumstances in which:**
  - the skier carries an object that significantly increases the skier's effective body weight,
  - the skier grasps or in some manner controls an object such as a sled, or the skier encounters exceptional snow or terrain
  - conditions not commonly found on developed ski slopes.
- Release torque values outside the recommendations of this practice may increase the risk of injury to the skier. However, skiers who are informed of this potential risk may request such settings and have them provided, subject to the guidelines and limitations specified in this document.
- These values refer to recommended release torque for initial adjustment of a ski binding and subsequent readjustment of the binding during routine maintenance or following a suspected malfunction. However, these values are not intended to apply to

the condition of the equipment at any time after it is put into use.

### 5. Checks and Functional Tests

- Upon completing installation and setting of the binding, the following inspection and functional checks should be performed:
  - boot center mark is aligned with the ski center mark
  - toe piece with the heel piece alignment by installing a boot in the binding, and checking that the binding heel pins are aligned with the boot insert.
  - heel location by checking gap between boot and binding.
  - both lateral twisting ( $M_L$ ), and forward falling ( $M_F$ ) adjustments on both bindings are set to the correct value.
  - lateral release travel by hitting the heel of the boot to displace it several mm and ensure that the binding returns to center quickly and smoothly.
  - heel pins do not interfere with the boot when the binding is in tour mode, and that the heel can easily be engaged and disengaged from tour mode.
  - toe positioning screws are tightened to the correct torque
  - verify release values with a binding test device. Follow the manufacturer's instructions for Dynafit® compatible bindings.

### 6. Troubleshooting

- If the lateral release ( $M_L$ ) is not symmetrical, check the following:
  - worn boot inserts
  - toe piece alignment with the heel. Check by installing boot in toe and checking that binding heel pins are aligned with boot heel insert. Test with multiple boots to ensure that boot heel and toe inserts are correctly aligned in boot.
  - dirt contamination or excessive wear of binding components, in particular the toe pins or heel pins.
  - heel location by checking gap between boot and binding. Refer to section 2.6.

### 7. Instructions to Customer

- Explain the operation and features of the binding. In particular:
  - Switch from ski to tour mode
  - Correct operation of heel lifts
  - Use of toe tour mode lock
- Explain the importance of regular maintenance and performance checks. The binding should be kept free of dirt and other contamination and that at the beginning of each season, and/or after 60 days of skiing, G3 ONYX or RUBY bindings be checked by an authorized G3 dealer and have the release setting recalibrated
- Explain that the binding release values are set to the customers personalized settings. Tell the customer the setting values selected, and where the setting adjustments are located.
- Explain the importance of having the binding adjusted correctly for boot sole length.
- Provide the customer with the retail box and include all instruction manuals in the bag provided.
- If the customer experiences any problems or issues with the boot, binding or ski, they should contact an authorized G3 dealer.

### 8. Warranty

- For complete warranty information, please visit: <http://www.genuineguidegear.com/service/g3-product-warranty>

### 9. Additional Information

- The G3 website [www.genuineguidegear.com](http://www.genuineguidegear.com) has the most current information regarding all G3 products. Please go to the website to find any recent updates and additional information on how to use the product.


Table 2 – Release Value Selection Using Skier's Weight

Skier's Parameters					Initial Indicator value, Z (presetting), depending on boot sole length						Inspection Parameters	
Skier's Mass kg	Skier's Height m	Skier's Mass lbs	Skier's Height ft in	Skier Code	<250m m	251 mm to 270 mm	271 mm to 290 mm	291 mm to 310 mm	311 mm to 330 mm	>331 mm	Lateral Twist Mz Nm	Forward Lean My Nm
											5	18
10 to 13		22 to 29		A	0.75	0.75					8	29
14 to 17		31 to 37		B	1	1	0.75				11	40
18 to 21		40 to 46		C	1.5	1.25	1				14	52
22 to 25		49 to 55		D	1.75	1.5	1.5	1.25			17	64
26 to 30		57 to 66		E	2.25	2	1.75	1.5	1.5		20	75
31 to 35		68 to 77		F	2.75	2.5	2.25	2	1.75	1.75	23	87
36 to 41		79 to 90		G	3.5	3	2.75	2.5	2.25	2	27	102
42 to 48	< 1.5	93 to 106	< 4'10"	H		3.5	3	3	2.75	2.5	31	120
49 to 57	1.5 to 1.6	108 to 126	4'11" to 5'2"	I		4.5	4	3.5	3.5	3	37	141
58 to 66	1.6 to 1.7	128 to 146	5'2" to 5'5"	J		5.5	5	4.5	4	3.5	43	165
67 to 78	1.7 to 1.8	148 to 172	5'6" to 5'10"	K		6.5	6	5.5	5	4.5	50	194
79 to 94	1.8 to 1.9	174 to 207	5'11" to 6'4"	L		7.5	7	6.5	6	5.5	58	229
95 <	2 <	209 <	6'5" <	M			8.5	8	7	6.5	67	271
				N			10	9.5	8.5	8	78	320
				O			11.5	11	10	9.5	91	380
				P							105	452
											118	540

Table 3 – ONYX/RUBY Mounting Guide

			Boot Sole Length <sup>1,2</sup>																																		
Fit Range <sup>1</sup> <small>Using G3 Onyx Mounting Jig</small>		Fit Range when using a Dynafit® Brand Mounting Jig <sup>1</sup>	270	273	275	278	280	283	285	288	290	293	295	298	300	303	305	308	310	313	315	318	320	323	325	328	330	333	335	338	340	343	345	348			
Mounting Jig Boot Size* (mm)	270	254mm-287mm	253mm-283mm																																		
	273	256mm-289mm	255mm-285mm																																		
	275	259mm-292mm	258mm-288mm																																		
	278	261mm-294mm	260mm-290mm																																		
	280	264mm-297mm	263mm-293mm																																		
	283	266mm-299mm	265mm-295mm																																		
	285	269mm-302mm	268mm-298mm																																		
	288	271mm-304mm	270mm-300mm																																		
	290	274mm-307mm	273mm-303mm																																		
	293	276mm-309mm	275mm-305mm																																		
	295	279mm-312mm	278mm-308mm																																		
	298	281mm-314mm	280mm-310mm																																		
	300	284mm-317mm	283mm-313mm																																		
	303	286mm-319mm	285mm-315mm																																		
	305	289mm-322mm	288mm-318mm																																		
	308	291mm-324mm	290mm-320mm																																		
	310	294mm-327mm	293mm-323mm																																		
	313	296mm-329mm	295mm-325mm																																		
	315	299mm-332mm	298mm-328mm																																		
	318	301mm-334mm	300mm-330mm																																		
320	304mm-337mm	303mm-333mm																																			
323	306mm-339mm	305mm-335mm																																			
325	309mm-342mm	308mm-338mm																																			
328	311mm-344mm	310mm-340mm																																			
330	314mm-347mm	313mm-343mm																																			
333	316mm-349mm	315mm-345mm																																			
335	319mm-352mm	318mm-348mm																																			
338	321mm-354mm	320mm-350mm																																			
340	324mm-357mm	323mm-353mm																																			
343	326mm-359mm	325mm-355mm																																			
345	329mm-362mm	328mm-358mm																																			
348	331mm-364mm	330mm-360mm																																			

<sup>1</sup>Variation in boot sole length, sole length measurement, and drilling of holes will result in variations in binding location. This may lead to a slightly different range than indicated. <sup>2</sup>This table ONLY applies to the boot length setting on G3 Onyx mounting jigs.

Ideal Fit  Variation in Boot Sole length measurement may cause fit issues