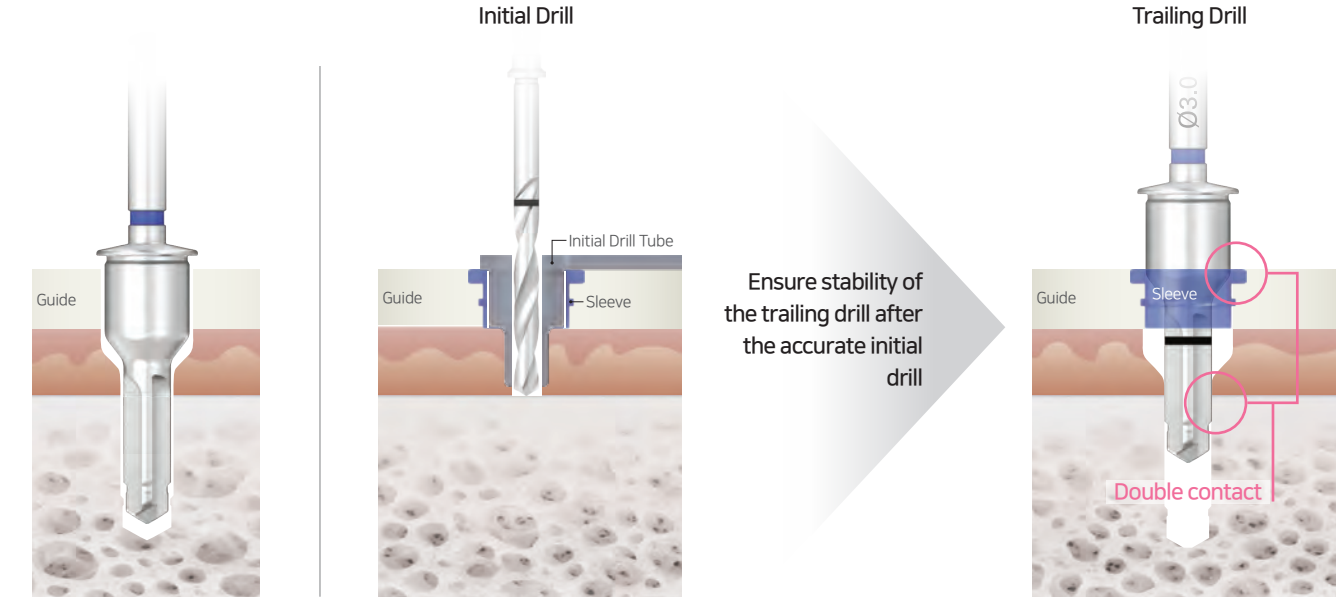
Utility of Guide Sleeve

1 Degree of Precision

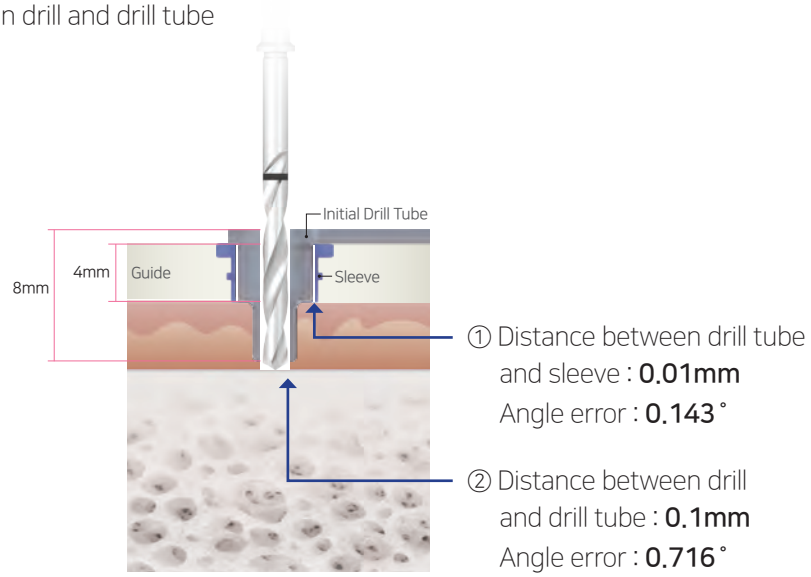
The accuracy of the initial drill determines the accuracy of the procedure.

1) Drill tube to increase accuracy
2) Increase precision of initial drill and maintain precision through double contact of the trailing drill

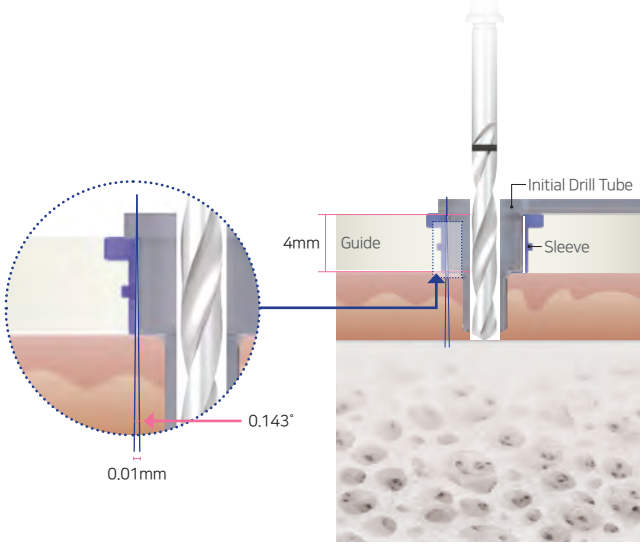


Possible error (angle) when applying sleeve - DIO Implant

① Error due to tolerance between drill tube and sleeve
② Error due to tolerance between drill and drill tube

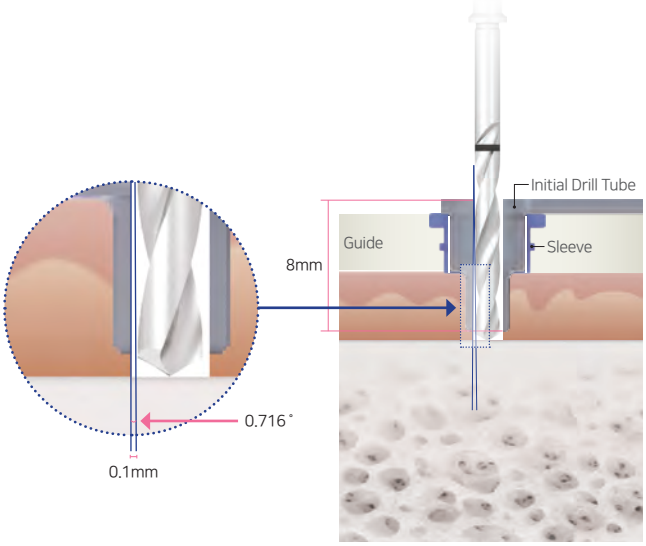


① Error due to tolerance between drill tube and sleeve



Distance between drill tube and sleeve : **0.01mm**
Angle error : **0.143°**

② Error due to tolerance between drill and drill tube

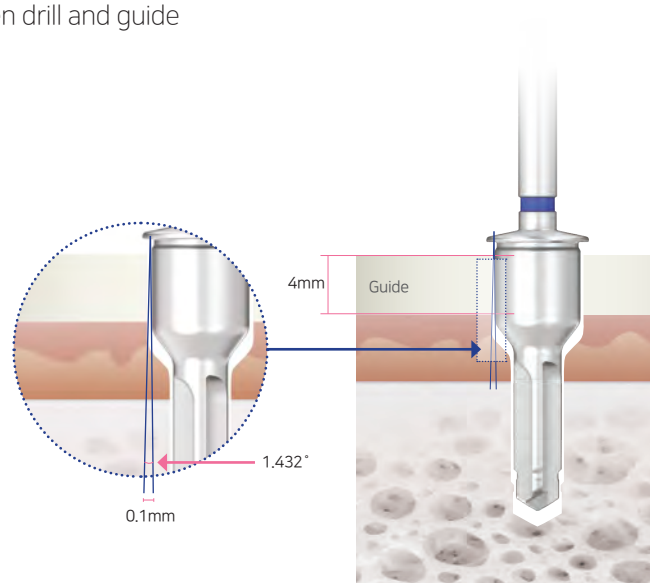


Distance between drill and drill tube : **0.1mm**
Angle error : **0.716°**

Max ① + ② → 0.143 + 0.716 = 0.859°

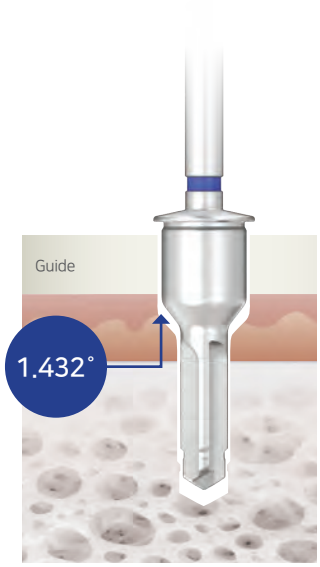
Possible error (angle) when not using sleeve - Other companies

Error due to tolerance between drill and guide



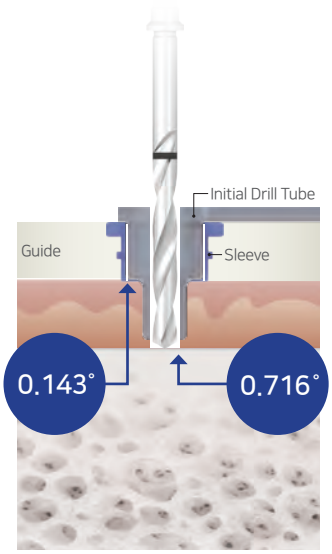
Distance between drill and guide : **0.1mm**
Angle error : **1.432°**

Final result (comparison)



Error due to tolerance between drill and guide

Final comparison according to sleeve application



Possible error (angle) when applying sleeve

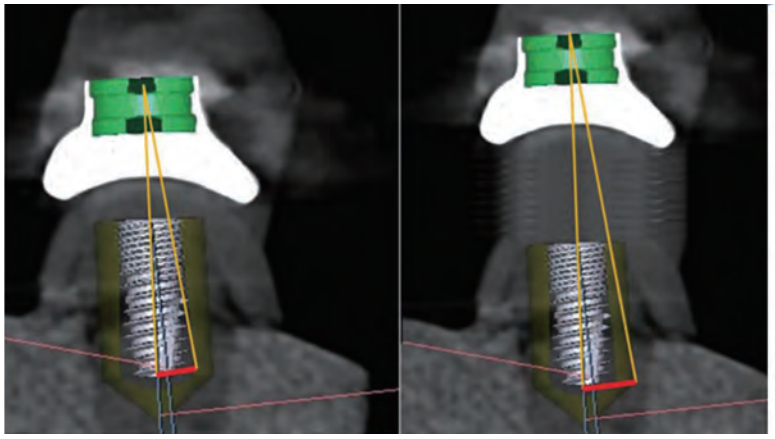
1.432°

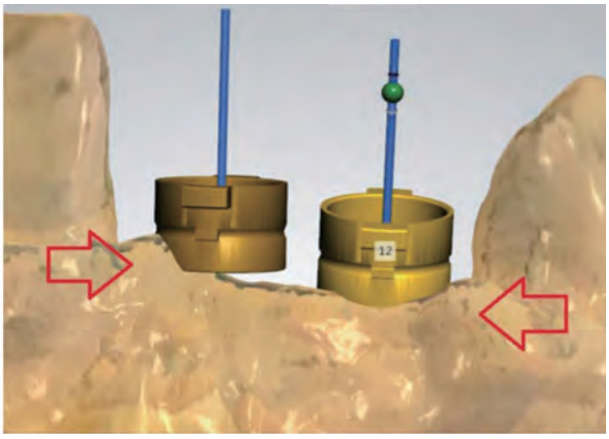
Standard Drill tube 8mm	Max	0.143 + 0.716 = 0.859°
	Min	0.716 - 0.143 = 0.573°
Narrow Drill tube 11mm	Max	0.143 + 0.521 = 0.664°
	Min	0.521 - 0.143 = 0.378°

PRECISION !

2 Ensuring precision when the gums are high

When the sleeve is not applied	When the sleeve is applied
Guide thickness should be made low, and even if the guide thickness is secured, the distance from the bone level becomes farther away, so the precision decreases	Guide thickness (sleeve thickness) can be secured because it can be positioned about 1 ~ 1.5mm below the upper part of the gum when the gums are high
	The distance to bone level is short so precision can be secured





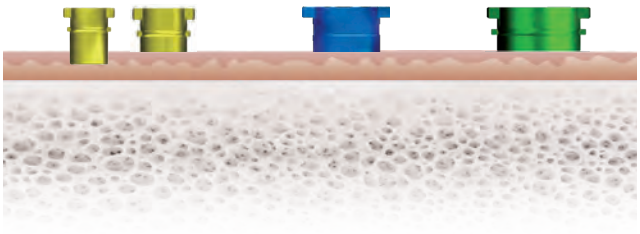
3 Color Recognition / Convinience and Precision of Prothesis Setting

1) Easy to classify into sleeve sizes by color coating
(Narrow / Y, Regular / B, Wide / G)

2) Hex direction protrusion is marked on both sides at the top of the sleeve
Easy to set Hex direction

The side of Hex matches
Depth matches

Narrow / Yellow Regular / Blue Wide / Green



4 Guide Chip Prevention

When there is no sleeve	Guide chip may occur due to split guide during drilling
When there is sleeve	Sleeve of titanium material significantly reduces splitting phenomenon during drilling