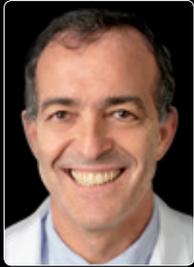




# *FACE EVOLUTION SYSTEM*



*Dr. Domingo Martín  
(Spain)*



*Dr. Jorge Ayala  
(Chile)*



*Dr. Douglas Knight  
(USA)*



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# The Prescription

*The orthodontic community has changed enormously in the last few years. In a competitive setting where cosmetics sales make up the majority of orthodontic treatments, we must today more than ever restate our belief that the present and future of our profession is going through a phase of clinical excellence. We understand orthodontics as a speciality whose purpose is integral oral health, in addition to aesthetics. Therefore, the aims of Stable Functional Occlusion, in addition to Dental and Facial Aesthetics, are goals that cannot be waived.*

*Over many years, our group has accumulated a vast amount of clinical experience, which has been backed by clinical studies and evidence and which, little by little, has led us down the path of excellence. Nothing has changed in the philosophy we defend; this is the guide that focuses us on attaining our aims.*

*However, the onset in the last few years of new technologies, both diagnostic and mechanical aspects, has led us to compare factors it was not possible to determine previously, which obliges us to query certain aspects of tooth positions and other mechanical options.*

*A painstaking investigation backed by clinical evidence enables us to update our technique and determine more precise values for the prescription, to help us to resolve common problems and focus more easily and quickly on achieving our aims.*

*We are proud to present FACE EVOLUTION.*

*Domingo Martín  
FACE Group Chairman*



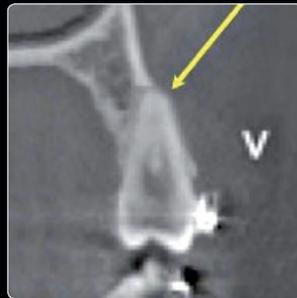
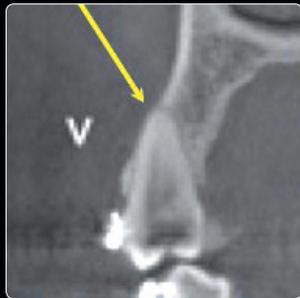
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# The Prescription

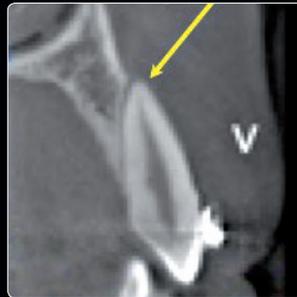
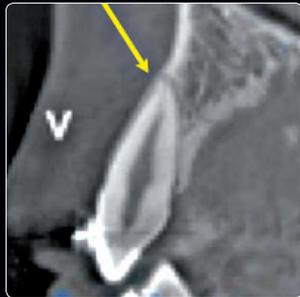
## ***The Prescription.***

*Since the introduction of the straight wire appliance in 1970 by Lawrence F. Andrews, several prescriptions have arisen that modify some torque, angulation and rotation values; however, they basically maintain virtually all Andrews' original prescription values. In most cases, these modifications seek to resolve certain aspects of orthodontic biomechanics, without overlooking those in which no clear justification is observed.*

*The latest developments also reveal that the concept of variable prescriptions has been taking over the single prescription to treat the entire spectrum of orthodontic abnormalities.*



*Tomography that reveals the radicular position of the upper premolars 2 months after inserting a .019" x .025" steel archwire in a bracket with torque  $-7^{\circ}$ .*



*Tomography that reveals the radicular position of the upper canines with straight arch brackets with  $-2^{\circ}$  torque, 2 months after inserting a .019" x .025" steel archwire.*

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# The Prescription

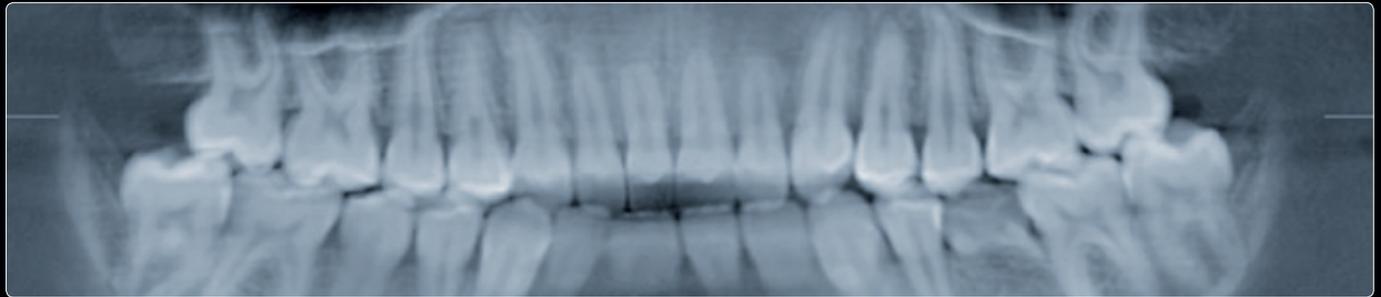
*Technological progress imposes new challenges on us: among them, Cone Beam Computed Tomography (CBCT), which provides us with a viewpoint of a reality we cannot obviate and doubtless will change many of the concepts of traditional orthodontics.*

*Studies performed with this diagnostic method reveal that a significant percentage of individuals present dehiscences and fenestrations before orthodontic treatment.*

*In addition to the above, evaluations under the use of CBCT, performed during the final stages of treatment, reveal a disturbing rate of roots outside the bone in different sectors of both jaws; this questions many of the values of negative torque, used in most prescriptions.*

*We admire the contribution made by Andrews, as one of the most important advances for orthodontics and everything appears to indicate that the values advocated by him, obtained from his sample of “abnormal orthodontics patients”, are not applicable to all orthodontic patients, especially those presenting poor apical bases and/or thin periodontium, quite a common situation.*

*Our hypothesis is that the individuals studied by Andrews had ideal occlusion, most probably because of their correct basal and alveolar development, a very different situation to that presented by most patients we treat in daily practice. It goes without saying that at the time of performing this research, the diagnostic methods we have today were not available.*



*Difference between the information supplied in regard to bone by Orthopantomography and Cone Beam Computed Tomography.*

## **FACE EVOLUTION Prescription**

### **Modifications to torque**

*As we explained, extensive clinical research has enabled us to tackle and resolve the problems revealed on CBCT. Previously we have not been able to observe the thickness of the vestibular and lingual alveolar bone available for orthodontic movement; x-ray examinations revealed the mesial and distal bone levels of the dental roots and it is not uncommon to see, thanks to CBCT, that the available vestibular or lingual bone of the teeth limits and is even not conducive to certain kinds of movement.*

*This reality is especially common for the lower incisors and upper and lower canines, but can also be observed in any area of the jaws.*

### **Torque in the Canines**

*For the canines, it is normal to find one very thin and one appreciably thicker vestibular bone in the palatal region. There are several cases in which the radicular prominence of the canine is so clinically evident that it suggests a different clinical approach.*

*On these occasions, the CBCT will reveal a very thin layer of vestibular cortical bone, and in some cases, a bone fenestration that contraindicates any radicular movement towards the vestibular region.*



Tomography revealing the most common situation in canines: a very poor or no vestibular bone, which contraindicates any kind of negative torque.



Clinical picture that clearly shows the radicular prominence and especially delicate periodontal situation in the upper canines.



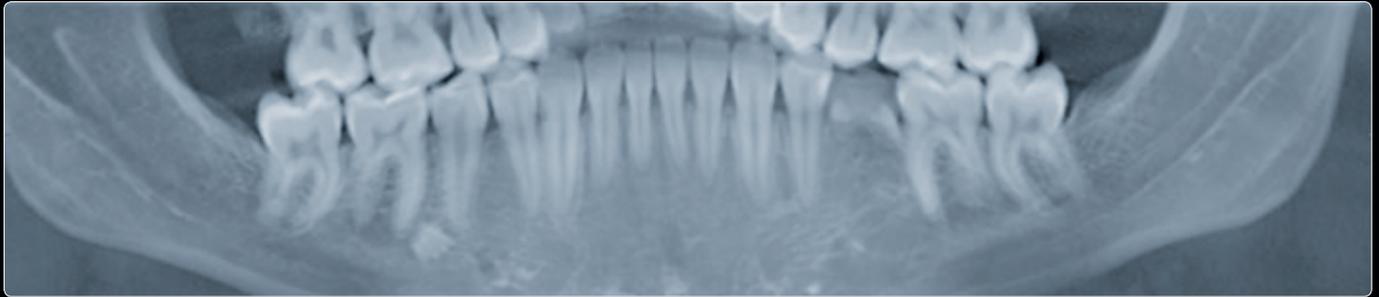
After using a .019" x .025" rectangular archwire with brackets of torque  $-2^\circ$  in the upper canines, it can be seen that the radicular problem is exacerbated further.

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# The Prescription

*This quite common situation is the basis for our modification of torque from  $-2^\circ$  to  $+3^\circ$  in the upper canines and from  $-11^\circ$  to  $-6^\circ$  in the lower canines.*

*In those cases of extreme radicular prominence, FACE EVOLUTION suggests taking the root towards the cancellous bone by means of a specially designed bracket, which as will be explained below, we call a working bracket, with a positive torque of  $+20^\circ$  for upper and lower canines. The objective sought with this bracket, is to quickly take the canine root to the lingual cancellous bone. This torque that may appear excessive barely leads to sufficient movement, as its effect is higher on a crown than a radicular level and in cases of fenestrated roots, enables us to attain bone recoating of the defect. Once the expected effect is obtained, we switch the working bracket to the standard prescription bracket ( $+3^\circ$ ) or ( $-6^\circ$ ).*



*The CBCT image shows the bone limitations for movement of the incisors.*

# The Prescription

## *Torque in the Lower Incisors*

*For the lower incisors FACE EVOLUTION has brackets with torque  $-1^\circ$  and  $-6^\circ$ , which we can transform into  $+6^\circ$  by merely inverting the position of the bracket by  $-6^\circ$ .*

*While it is true that theoretically the bracket for lower incisors with  $+6^\circ$  would be ideal to compensate class II malocclusions and give a correct anterior anchorage, for cases of minimum anchorage (and unlike the torque  $-6^\circ$ ), the truth is that the choice of incisor torque*

*will mainly be determined by the available alveolar bone in each case. The bone factor is the most important variable for the selection of the torque and tooth inclination and for the possibilities of anterior expansion, protrusion and retrusion.*

*The prescription considers this form, which is an important aim of Periodontal Health.*



*Picture of a tube of a known brand that reveals the features of the slot and the lack of rectangular form of a.019" x.025" steel archwire. Obvious explanation of the lack of efficiency to produce torque.*



*FORESTADENT.*

# The Prescription

## **Torque in the molars**

*Another area in which torque has been modified is that of the upper molars. Any orthodontist concerned about obtaining a functional occlusion knows that premature contacts in the second molars are very common. This is mainly due to the existence of positive molar torque, marked by “hanging” palatal cusps which interfere with the mandibular closure as it occludes with the tip of the antagonist cusps, which commonly also leads to lateral interferences. The problem we face clinically is that the straight arch wire is commonly inefficient when correcting molar torque, even when using .021” x .025” steel arch wires, which forces us to use Transpalate bars and/or torsion bends in the arches.*

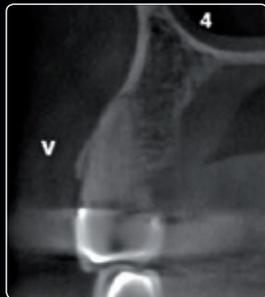
*One of the causes of this inefficiency is the play presented by the arches in the lumen of the tubes. Several studies have demonstrated that this play is because of a slight oversizing of the slots of the brackets and play of the tubes and also the fact that the arches are slightly smaller than stated by manufacturers and often even have rounded edges. Tests performed with tubes from several companies reveal to us angles of torque loss of up to 26° with .019” x .025” steel arch wires and up to 11° with .021” x .025” arch wires.*



*Tomography that reveals this clinical situation in a 2nd left upper molar, in this case with an appropriate bone for correction of the torque (V: vestibular).*



*Common situation especially in the upper 2nd molars with positive torque, which not only leads to increased occlusal vertical size but also interference with centric and eccentric mandibular movements.*



*Tomography revealing the radicular situation to consider during correction of the torque (V: vestibular).*



*Models that reveal the before and after the correction of torque for the 7s.*

# The Prescription

*To resolve this problem, a negative torque of  $-30^\circ$  has been introduced into the upper molar tubes, which allows us to compensate the play of the wires in the tube and correct the torque effectively. However, special care must always be taken in regard to the amount of available bone, because in some cases this could even contraindicate any kind of movement. We would like to insist on the fact that the aim of this modification is not to attain a torque of  $-30^\circ$ , but rather this is a way of compensating the torque loss of the arches in the tubes, to attain the torque specified by Roth of  $-14^\circ$ , which in turn is an over correction of the torque reported by Andrews of  $-9^\circ$ .*

*To summarise, the differences in torque in regard to Roth's prescription are found in the upper and lower canines, and the upper molars. The alternative for the lower incisor of  $-6^\circ$  and  $+6^\circ$  is also added.*

## **Rotations**

*One of the attributes of the Roth prescription is the excellent anchorage obtained, to a large extent thanks to the distal rotation produced in the upper and lower molars. However, this feature which is so useful for retrusion of the anterior teeth, turns into a hindrance in two situations: the first, in cases of minimal anchorage, especially in the lower jaw; the second, to obtain suitable finishing, by not enabling correct intercuspation and coordination of the antagonist molars.*

*Indeed, virtually 100% of patients treated with this prescription, analysed in Centric Relation, present interference with the closure, especially the area of the second molars, which Roth's philosophy resolves, once the appliances are withdrawn, by using a gnathologic positioner.*

*This situation is because of the loss of alignment of the mesiodistal occlusal sulci of both the upper and lower first and second molars. The reason for this loss of alignment is found in the distal rotation*



*Occlusal photo that presents correct alignment of the mesiodistal sulci of the molars and premolars, a fundamental aspect to attain correct occlusion. The tubes used have a distal rotation of +10°.*

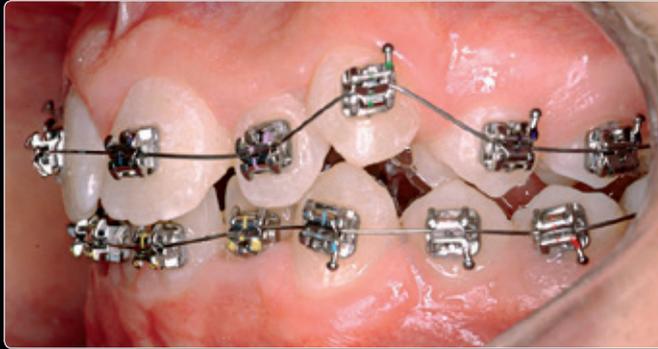
*of 14° in the first molars, which has the consequence of an antagonistic reciprocal effect in the second molar, which is displaced towards the vestibular region. This undesired movement occurs when applying positive rotations above 10°, a usual situation in normal prescriptions, and conversely, does not appear when the*



*Occlusal photo that reveals the misalignment of the marginal ridges of the first and second upper molars, with tubes of +14° distal rotation.*

*rotation of the first molar is +10°. To obviate this problem, we have maintained 10° rotation in the upper molars and 0° rotation in the lower molars, reported by Andrews; this enables perfect finishing in most cases and at the same time facilitates space closure in cases of minimal or medium anchorage.*

# The Prescription



## *Prescription for work and Prescription for finish*

*FACE EVOLUTION incorporates a new concept into orthodontic bio-mechanics: working prescription and finishing prescription.*

*The work prescription consists of using specific tubes and brackets for their temporary use in certain situations, with the purpose of facilitating attaining certain aims.*

*The Prescription for finish is the one obtained with the use of the standard FACE EVOLUTION prescription, a good finish in a high percentage of cases, without needing to bend the arches. In some situations, because of minor anatomic variations, the necessary adjustments should be performed.*





# The Prescription

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## **Working Tubes**

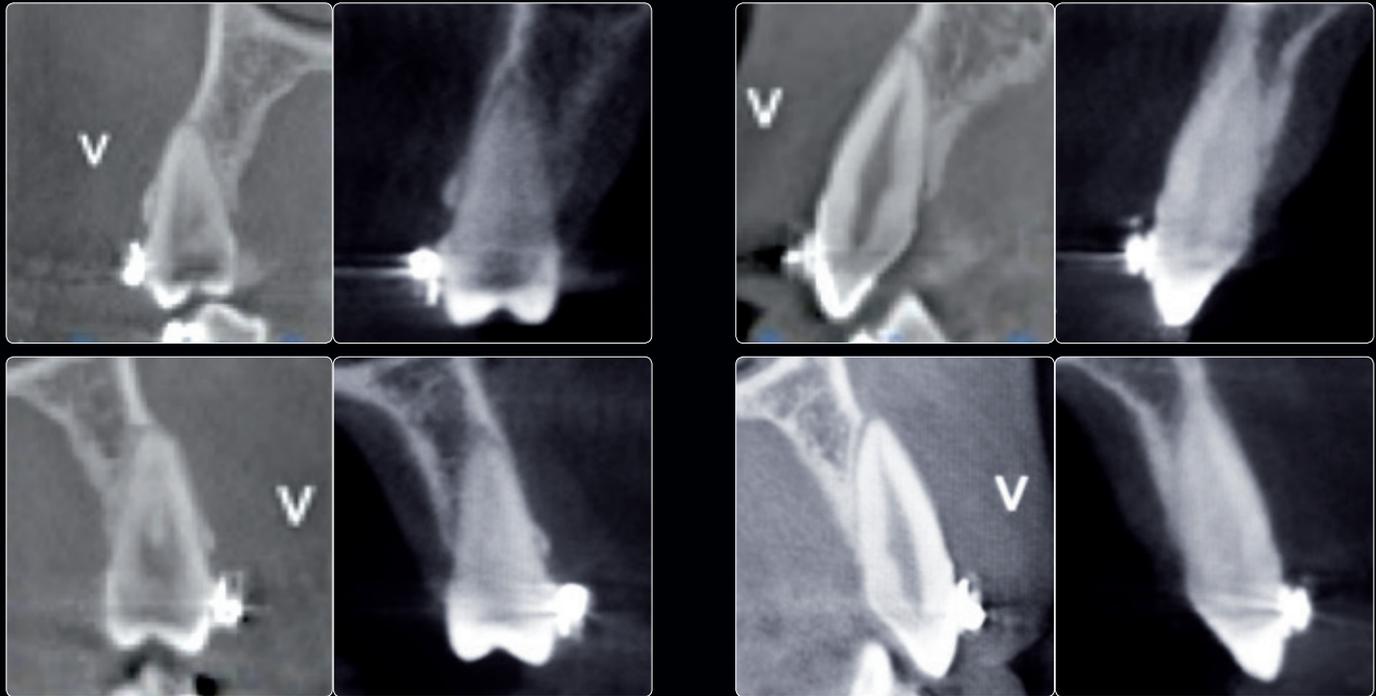
*By varying the mesiodistal position of the tubes, we can modify the rotation values, and therefore, the anchorage values to tackle cases of minimum, medium and maximum anchorage.*

*Therefore, the tube will have three vertical guides that enable us to locate the tube more mesially for cases of maximum anchorage, or more distally for cases of minimum anchorage, and a central framework for cases of medium anchorage and finishing stage. These guidelines will coincide with the main vestibular sulcus as indicated. Tubes with marking will be available as of 2016.*

*With a same tube we can therefore attain three different anchorages (standard,  $+4^\circ$  and  $-4^\circ$ ), simply and efficiently; the necessary inventory is also simplified; this is like having three different prescriptions in the same tube.*

*As its name indicates, the Prescription for work is the one with which we can perform specific actions, for example distalation or retrusion of the six anterosuperior teeth or mesialisation of the posterior segments, by increasing or reducing the anchorage as required.*

*Once the required aim is obtained, in this case closure of the spaces, we will switch to the Prescription for finish by positioning the tubes in the usual way.*



*Before and after correction with working bracket; the apex is seen inside the bone.*

# The Prescription

## Working brackets

For cuspids, the working bracket with  $20^\circ$  positive torque will enable us to place these teeth in the required position to be subsequently replaced with the standard torque bracket or bracket with the final prescription.

For the mandible, the molar torque of  $-30^\circ$  operates efficiently in most cases, although at times not in the case of second molars. Indeed, in a lower percentage of cases, the second lower molar “tips” towards the lingual region, especially in those cases with an accentuated curve of Spee.

The explanation appears to reside in the fact that when attempting to access these molars and given that the apices are in relation to the compact bone of the external oblique line, this undesired effect would occur, which is difficult to resolve.

Therefore, FACE EVOLUTION proposes a working tube with  $0^\circ$  of torque which, once the molar torque has been corrected, should be replaced with the prescription’s standard finishing tube.

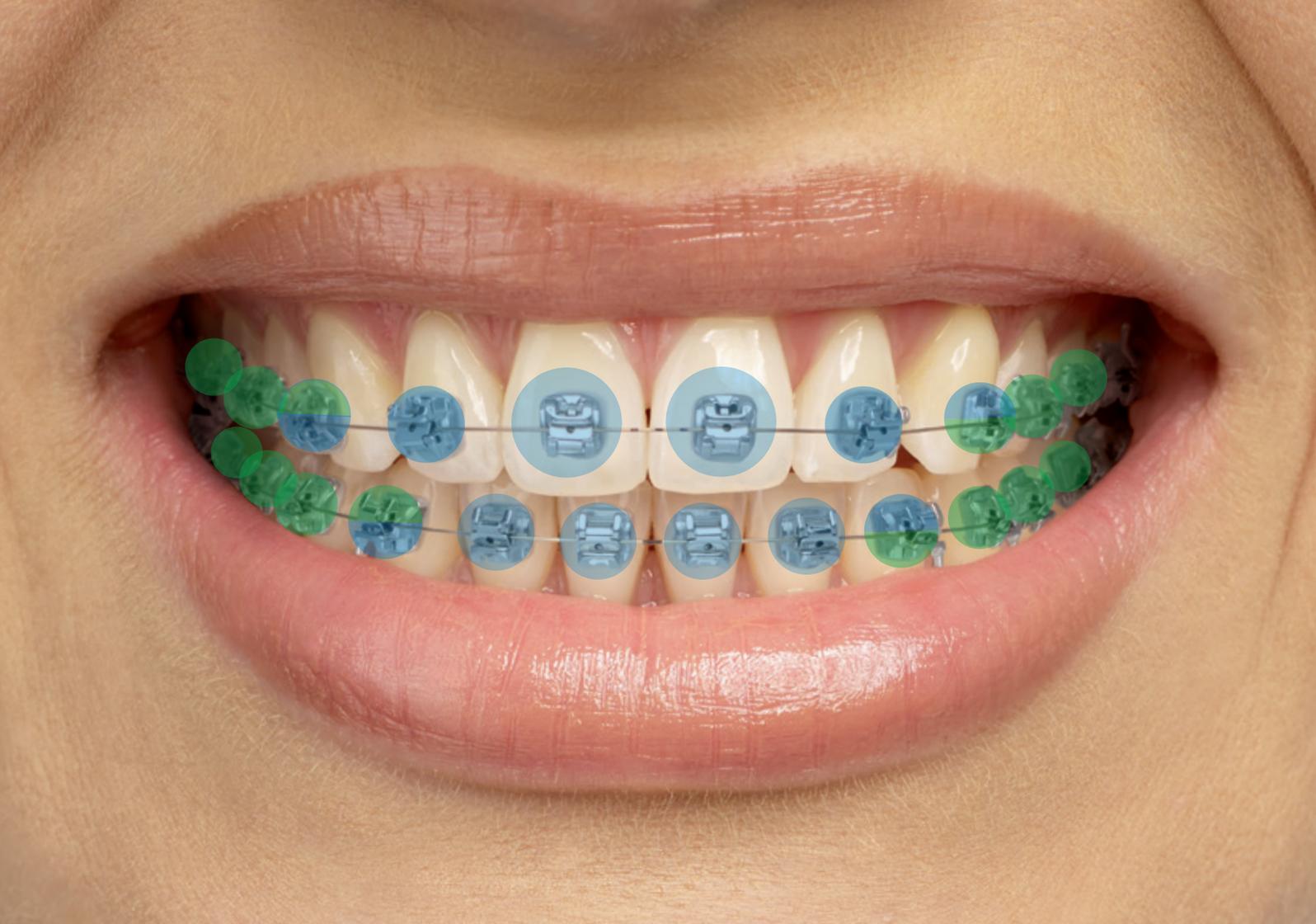
## Working brackets and working tubes FACE EVOLUTION System

Maxillary					Slot .018"		Slot .022"	
C € 0297					Order no.		Order no.	
Tooth	Torque	Angulation	In/Out	Rotation	Right	Left	Right	Left
<b>3</b> Cuspid	+14°	+8°	1,0	–	739-0323	738-0323	739-0321	738-0321
<b>7</b> 2. Molar	0°	0°	0°	6°	748-8311	748-8211	748-8321	748-8221

### Bibliography:

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## **Active System and Hybrid System**

*It is difficult to come to an agreement in regard to which self-ligating system has more advantages and less disadvantages. Various papers conclude that sliding mechanics are favoured for the use of passive self-ligating brackets but control of the root position could be comprised. They also confirm that the sliding resistance (SR) is necessary when we have to produce torque and correctly position the root for correct finishing. The wish to minimise resistance to friction (SR) should be moderated, because of the need to control movement of the teeth. In the new FACE EVOLUTION we have opted to take the advantages of both parts by means of two versions: the Active System and the Hybrid System.*

*The active system gives us more control:*

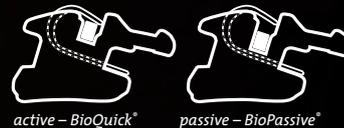
*During subsequent treatment stages, sliding resistance (SR) increases along with the size of the arch. This provides better three-dimensional control and fills the sulcus to produce a torque force that correctly positions the root and the crown.*

*The Hybrid system provides the clinician with the best combination of low friction and control, especially in cases with extractions.*

*A recent study performed by Dr Douglas Knight on 400 finished patients, concluded that the duration of treatment and number of appointments of 200 patients treated with the Hybrid System reduced by 15%.*



*The FACE EVOLUTION Bracket.  
Fully redesigned bracket (4<sup>th</sup> generation 2014)*



*A stronger and wider clip,  
which can be replaced if  
required, and features a catch  
function for vestibular opening*

*Rounded bracket and slot  
edges for greater intraoral  
comfort and less friction*

*Thanks to a separate  
0.016" x 0.016" auxiliary slot,  
auxiliary units can be easily  
and simply inserted*

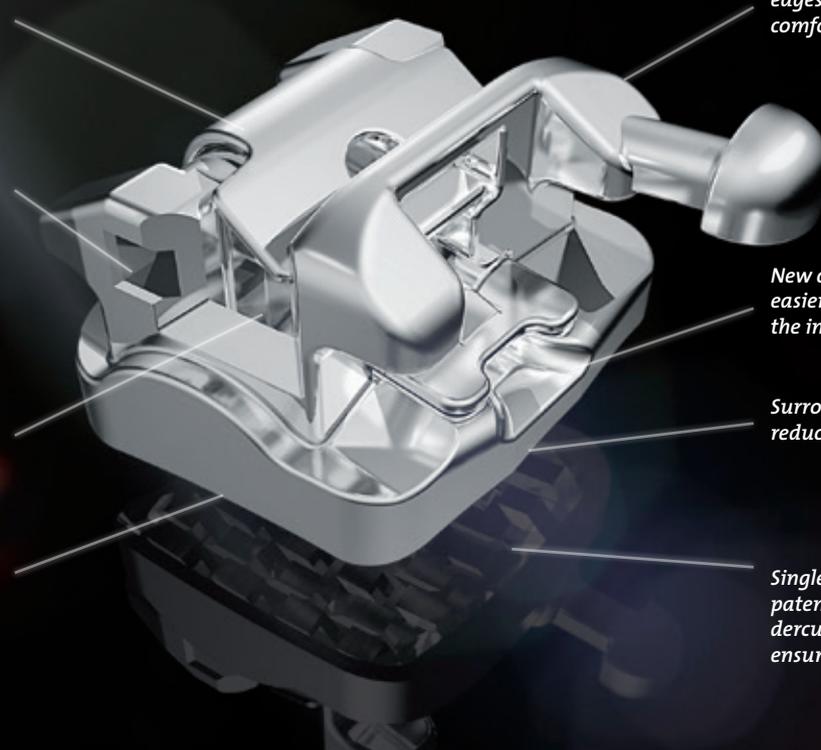
*New catch function for  
easier gingival opening of  
the interactive clip*

*Four rounded contact ribs  
in the slot reduce binding  
and notching*

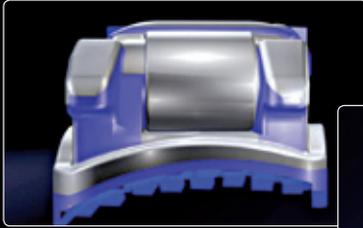
*Surrounding pad edge  
reduces adhesive overflow*

*Thanks to the redesigned,  
anatomically-adapted  
base, positioning is a  
truly enjoyable task*

*Single-piece bracket body:  
patented hook-shaped un-  
dercuts on the bracket base  
ensure reliable adhesion*



# The equipment



*Ultralow profile: makes the bracket more efficient and comfortable.*



*Broad canal in the funnel: facilitates contact with the clip, leading to a remarkably simple opening from this area.*



*Broader and thicker clip: increases durability and improves control.*



*Magnificent digitalised anatomical base: facilitates positioning and bonding of the bracket.*

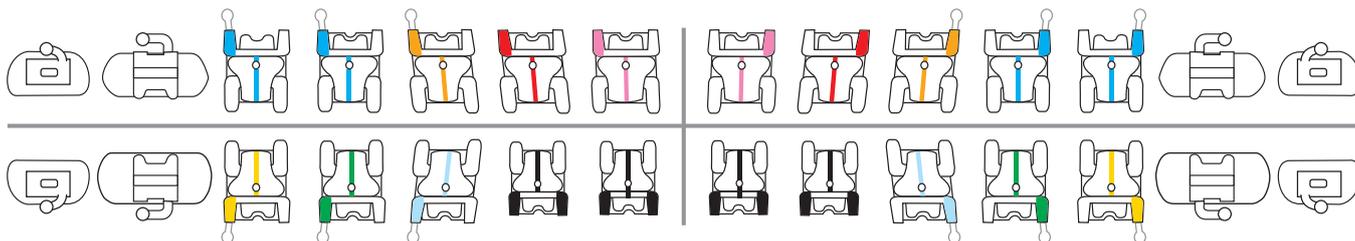


*Triple opening and new instrument system: gives the system versatility and facilitates opening from any position.*



*Two-pronged probe.*

## BioQuick® active Brackets – FACE EVOLUTION System



Maxillary					Slot .018"		Slot .022"	
C € 0297					Order no.		Order no.	
Teeth	Torque	Angulation	In/Out	Rotation	Right	Left	Right	Left
<b>1</b> Centrals	+12°	+5°	0,8	–	739-0103	738-0103	739-0101	738-0101
<b>2</b> Laterals	+8°	+9°	1,3	–	739-0203	738-0203	739-0201	738-0201
<b>3</b> Cuspids	+3°	+8°	0,8	–	739-0303	738-0303	739-0301	738-0301
Cuspids + hook	+3°	+8°	0,8	–	739-0313	738-0313	739-0311	738-0311
<b>4</b> Bicuspids	-7°	0°	0,9	–	739-0503	738-0503	739-0501	738-0501
Bicuspids + hook	-7°	0°	0,9	–	739-0513	738-0513	739-0511	738-0511
<b>5</b> Bicuspids	-7°	0°	0,9	–	739-0503	738-0503	739-0501	738-0501
Bicuspids + hook	-7°	0°	0,9	–	739-0513	738-0513	739-0511	738-0511
<b>6</b> 1. Molar	-30°	0°	–	10	739-0704	738-0704	739-0702	738-0702
<b>7</b> 2. Molar	-30°	0°	–	6	739-0804	738-0804	739-0802	738-0802

Mandibular <span style="float: right;">C € 0297</span>					Slot .018"		Slot .022"	
Teeth	Torque	Angulation	In/Out	Rotation	Order no.		Order no.	
					Right	Left	Right	Left
<b>1</b> Centrals	-1°	0°	1,4	-	738-1303	738-1303	738-1301	738-1301
<b>2</b> Laterals	-1°	0°	1,4	-	738-1303	738-1303	738-1301	738-1301
<b>3</b> Cuspids Cuspids + hook	-6°	+2°	1,2	-	739-1403	738-1403	739-1401	738-1401
	-6°	+2°	1,2	-	739-1413	738-1413	739-1411	738-1411
<b>4</b> Bicuspids Bicuspids + hook	-17°	0°	1,2	-	739-1503	738-1503	739-1501	738-1501
	-17°	0°	1,2	-	739-1513	738-1513	739-1511	738-1511
<b>5</b> Bicuspids Bicuspids + hook	-22°	0°	1,2	-	739-1603	738-1603	739-1601	738-1601
	-22°	0°	1,2	-	739-1613	738-1613	739-1611	738-1611
<b>6</b> 1. Molar	-30°	0°	-	-	739B1704	738B1704	739B1702	738B1702
<b>7</b> 2. Molar	-30°	0°	-	-	739-1804	738-1804	739-1802	738-1802

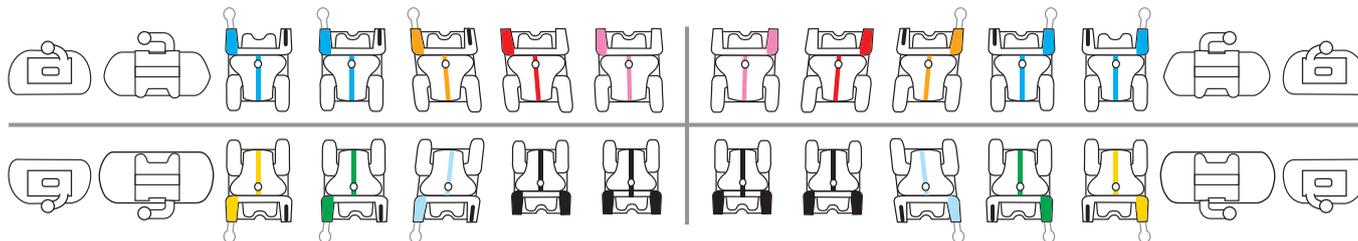
Cases / Variations	Slot .018"			Slot .022"		
	1	5	10	1	5	10
	706-1200	706-1201	706-1202	706-1209	706-1210	706-1211
 3	706-1203	706-1204	706-1205	706-1212	706-1213	706-1214
 3-5	706-1206	706-1207	706-1208	706-1215	706-1216	706-1217

*More optional torque for central and lower lateral teeth.*

Mandibular <span style="float: right;">C € 0297</span>					Slot .018"		Slot .022"	
Teeth	Torque	Angulation	In/Out	Rotation	Order no.		Order no.	
					Right	Left	Right	Left
<b>1+2</b> Centrals / Laterals	-6° *	0°	1,4	-	738-1203	738-1203	738-1201	738-1201

\*Bonding brackets upside down will convert from -6° Torque to +6° Torque. But keep in mind: the clip has to be opened to gingival. Please specify whether you prefer this option.

## BioQuick® + BioPassive® Brackets – FACE EVOLUTION Hybrid System



Maxillary					Slot .018"		Slot .022"	
C € 0297					Order no.		Order no.	
Teeth	Torque	Angulation	In/Out	Rotation	Right	Left	Right	Left
<b>1</b> Centrals	+12°	+5°	0,8	–	739-0103	738-0103	739-0101	738-0101
<b>2</b> Laterals	+8°	+9°	1,3	–	739-0203	738-0203	739-0201	738-0201
<b>3</b> Cuspids	-2°	+11°	0,8	–	739H0303	738H0303	739H0301	738H0301
Cuspids + hook	-2°	+11°	0,8	–	739H0313	738H0313	739H0311	738H0311
<b>4</b> Bicuspids	-7°	0°	0,9	–	739H0503	738H0503	739H0501	738H0501
Bicuspids + hook	-7°	0°	0,9	–	739H0513	738H0513	739H0511	738H0511
<b>5</b> Bicuspids	-7°	0°	0,9	–	739H0503	738H0503	739H0501	738H0501
Bicuspids + hook	-7°	0°	0,9	–	739H0513	738H0513	739H0511	738H0511
<b>6</b> 1. Molar	-30°	0°	–	10	739-0704	738-0704	739-0702	738-0702
<b>7</b> 2. Molar	-30°	0°	–	6	739-0804	738-0804	739-0802	738-0802

Mandibular <span style="float: right;">C € 0297</span>					Slot .018"		Slot .022"	
Teeth	Torque	Angulation	In/Out	Rotation	Order no.		Order no.	
					Right	Left	Right	Left
<b>1</b> Centrals	-1°	0°	1,4	-	738-1303	738-1303	738-1301	738-1301
<b>2</b> Laterals	-1°	0°	1,4	-	738-1303	738-1303	738-1301	738-1301
<b>3</b> Cuspids Cuspids + hook	-11°	+7°	1,2	-	739H1403	738H1403	739H1401	738H1401
	-11°	+7°	1,2	-	739H1413	738H1413	739H1411	738H1411
<b>4</b> Bicuspids Bicuspids + hook	-17°	0°	1,2	-	739H1503	738H1503	739H1501	738H1501
	-17°	0°	1,2	-	739H1513	738H1513	739H1511	738H1511
<b>5</b> Bicuspids Bicuspids + hook	-22°	0°	1,2	-	739H1603	738H1603	739H1601	738H1601
	-22°	0°	1,2	-	739H1613	738H1613	739H1611	738H1611
<b>6</b> 1. Molar	-30°	0°	-	-	739B1704	738B1704	739B1702	738B1702
<b>7</b> 2. Molar	-30°	0°	-	-	739-1804	738-1804	739-1802	738-1802

Cases / Variations	Slot .018"			Slot .022"		
	1	5	10	1	5	10
	706H1200	706H1201	706H1202	706H1209	706H1210	706H1211
3	706H1203	706H1204	706H1205	706H1212	706H1213	706H1214
3-5	706H1206	706H1207	706H1208	706H1215	706H1216	706v1217

*More optional torque for central and lower lateral teeth.*

Mandibular <span style="float: right;">C € 0297</span>					Slot .018"		Slot .022"	
Teeth	Torque	Angulation	In/Out	Rotation	Order no.		Order no.	
					Right	Left	Right	Left
<b>1+2</b> Centrals / Laterals	-6° *	0°	1,4	-	738-1203	738-1203	738-1201	738-1201

\*Bonding brackets upside down will convert from -6° Torque to +6° Torque. But keep in mind: the clip has to be opened to gingival. Please specify whether you prefer this option.



*Quicklear® brackets offer an aesthetic alternative and may be combined to active or hybrid cases.*



*In our series of ceramic brackets, Quicklear® offers you an active, self-ligating version with flexible metal clip. Quicklear® is convenient to handle and, thanks to the wide and interactive clip, offers a high degree of angulation, rotation and torque control.*

- *Translucent ceramic: Developed by us, less obvious for your patients.*
- *The clip is inconspicuous too: The chrome-cobalt clip shimmers with a matt lustre thanks to its surface treatment, rather than shining noticeably.*
- *Simply comfortable: Simple opening and closing of the clip makes application completely uncomplicated.*
- *Effectively combines: The bracket can be easily combined with BioQuick®.*

*Strong hold: With the inverted hook base we developed for ceramic brackets, Quicklear® bonds to the tooth purely mechanically and excellently.*

# The equipment



*Pauls-Tool for chip-free debonding.*



*QuickKlear® brackets are easy to remove with the Pauls-Tool. This special tool - which only we build - is simple to apply and is used with a tilting movement in the mesial or distal direction. Without damaging the precious brackets or the even more valuable dental enamel. No chipping, no fracturing. At the end of the treatment or if you have to reposition in-between: Place Pauls-Tool into position, remove the bracket, perform sand abrasion and bond again.*



*QuickKlear® brackets can be opened from the gingival or from vestibular directions. The clip moves in the occlusal direction in these cases.*



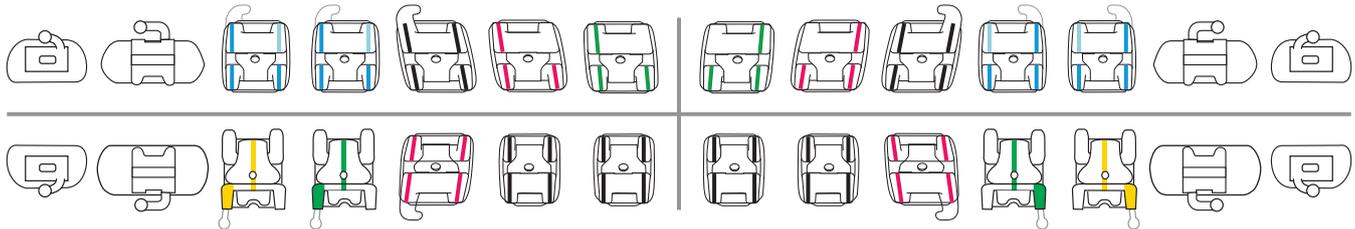
*„Pauls-Tool“ for debonding of QuickKlear® brackets.  
Order no. C501-0815.*

*Forestadent's additional opening tool makes opening particularly easy. QuickKlear® are easy to open with a classical opening instrument.*



*Classic opening instrument, double sided.  
Order no. C501-1842*

## Quicklear® Brackets – FACE EVOLUTION System



Maxillary					Slot .018"		Slot .022"	
C € 0297					Order no.		Order no.	
Teeth	Torque	Angulation	In/Out	Rotation	Right	Left	Right	Left
<b>1</b> Centrals	+12°	+5°	0,8	–	C739-0103	C738-0103	C739-0101	C738-0101
<b>2</b> Laterals	+8°	+9°	1,3	–	C739-0203	C738-0203	C739-0201	C738-0201
<b>3</b> Cuspids + hook	+3°	+8°	0,8	–	C739-0313	C738-0313	C739-0311	C738-0311
<b>4</b> Bicuspids	–7°	0°	0,9	–	C739-0503	C738-0503	C739-0501	C738-0501
Bicuspids + hook	–7°	0°	0,9	–	C739-0513	C738-0513	C739-0511	C738-0511
<b>5</b> Bicuspids	–7°	0°	0,9	–	C739-0503	C738-0503	C739-0501	C738-0501
Bicuspids + hook	–7°	0°	0,9	–	C739-0513	C738-0513	C739-0511	C738-0511
<b>6</b> 1. Molar	–30°	0°	–	10	739-0704	738-0704	739-0702	738-0702
<b>7</b> 2. Molar	–30°	0°	–	6	739-0804	738-0804	739-0802	738-0802

Mandibular					Slot .018"		Slot .022"	
C € 0297					Order no.		Order no.	
Teeth	Torque	Angulation	In/Out	Rotation	Right	Left	Right	Left
<b>1</b> Centrals	-1°	0°	1,4	-	C738-1303	C738-1303	C738-1301	C738-1301
<b>2</b> Laterals	-1°	0°	1,4	-	C738-1303	C738-1303	C738-1301	C738-1301
<b>3</b> Cuspids + hook	-6°	+2°	1,2	-	C739-1413	C738-1413	C739-1411	C738-1411
<b>4</b> Bicuspids	-17°	0°	1,2	-	739-1503	738-1503	739-1501	738-1501
	Bicuspids + hook	-17°	0°	1,2	-	739-1513	738-1513	739-1511
<b>5</b> Bicuspids	-22°	0°	1,2	-	739-1603	738-1603	739-1601	738-1601
	Bicuspids + hook	-22°	0°	1,2	-	739-1613	738-1613	739-1611
<b>6</b> 1. Molar	-30°	0°	-	-	739B1704	738B1704	739B1702	738B1702
<b>7</b> 2. Molar	-30°	0°	-	-	739-1804	738-1804	739-1802	738-1802

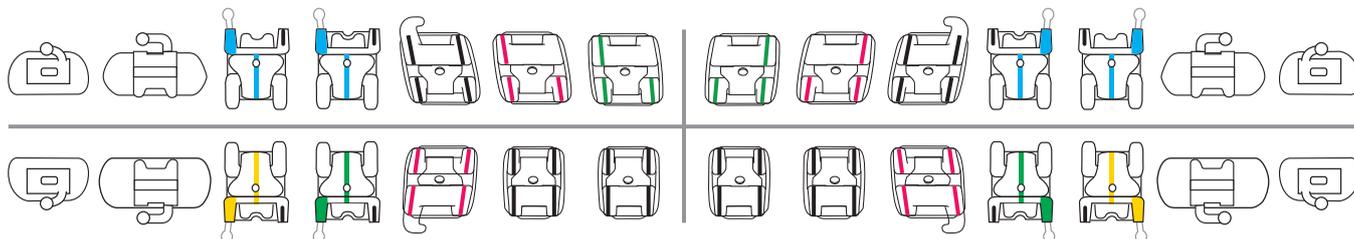
Cases / Variation	Slot .018"			Slot .022"		
	1	3	6	1	3	6
 3	C706-1203	C706-1204	C706-1205	C706-1212	C706-1213	C706-1214
 3-5	C706-1206	C706-1207	C706-1208	C706-1215	C706-1216	C706-1217

*Optionally more torque on mandibular Centrals and Laterals*

Mandibular					Slot .018"		Slot .022"	
C € 0297					Order no.		Order no.	
Teeth	Torque	Angulation	In/Out	Rotation	Right	Left	Right	Left
<b>1+2</b> Centrals / Laterals	-6° *	0°	1,4	-	C738-1203	C738-1203	C738-1201	C738-1201

\*Bonding brackets upside down will convert from -6° Torque to +6° Torque. But keep in mind: the clip has to be opened to gingival. Please indicate if you prefer this option.

## BioQuick® + BioPassive® Brackets – FACE EVOLUTION Hybrid System



Maxillary					Slot .018"		Slot .022"	
C€ 0297					Order no.		Order no.	
Teeth	Torque	Angulation	In/Out	Rotation	Right	Left	Right	Left
<b>1</b> Centrals	+12°	+5°	0,8	–	C739-0103	C738-0103	C739-0101	C738-0101
<b>2</b> Laterals	+8°	+9°	1,3	–	C739-0203	C738-0203	C739-0201	C738-0201
<b>3</b> Cuspids + hook	+3°	+8°	0,8	–	C739-0313	C738-0313	C739-0311	C738-0311
<b>4</b> Bicuspids	-7°	0°	0,9	–	739H0503	738H0503	739H0501	738H0501
Bicuspids + hook	-7°	0°	0,9	–	739H0513	738H0513	739H0511	738H0511
<b>5</b> Bicuspids	-7°	0°	0,9	–	739H0503	738H0503	739H0501	738H0501
Bicuspids + hook	-7°	0°	0,9	–	739H0513	738H0513	739H0511	738H0511
<b>6</b> 1. Molar	-30°	0°	–	10	739-0704	738-0704	739-0702	738-0702
<b>7</b> 2. Molar	-30°	0°	–	6	739-0804	738-0804	739-0802	738-0802

Mandibular					Slot .018"		Slot .022"		
C € 0297					Order no.		Order no.		
Teeth	Torque	Angulation	In/Out	Rotation	Right	Left	Right	Left	
<b>1</b> Centrals	-1°	0°	1,4	-	C738-1303	C738-1303	C738-1301	C738-1301	
<b>2</b> Laterals	-1°	0°	1,4	-	C738-1303	C738-1303	C738-1301	C738-1301	
<b>3</b> Cuspids + hook	-6°	+2°	1,2	-	C739-1413	C738-1413	C739-1411	C738-1411	
<b>4</b>	Bicuspids	-17°	0°	1,2	-	739H1503	738H1503	739H1501	738H1501
	Bicuspids + hook	-17°	0°	1,2	-	739H1513	738H1513	739H1511	738H1511
<b>5</b>	Bicuspids	-22°	0°	1,2	-	739H1603	738H1603	739H1601	738H1601
	Bicuspids + hook	-22°	0°	1,2	-	739H1613	738H1613	739H1611	738H1611
<b>6</b> 1. Molar	-30°	0°	-	-	739B1704	738B1704	739B1702	738B1702	
<b>7</b> 2. Molar	-30°	0°	-	-	739-1804	738-1804	739-1802	738-1802	

Cases / Variation	Slot .018"			Slot .022"		
	1	3	6	1	3	6
 3	C706H1203	C706H1204	C706H1205	C706H1212	C706H1213	C706H1214
 3-5	C706H1206	C706H1207	C706H1208	C706H1215	C706H1216	C706H1217

*Optionally more torque on mandibular Centrals and Laterals*

Mandibular					Slot .018"		Slot .022"	
C € 0297					Order no.		Order no.	
Teeth	Torque	Angulation	In/Out	Rotation	Right	Left	Right	Left
<b>1+2</b> Centrals / Laterals	-6° *	0°	1,4	-	C738-1203	C738-1203	C738-1201	C738-1201

\*Bonding brackets upside down will convert from -6° Torque to +6° Torque. But keep in mind: the clip has to be opened to gingival. Please indicate if you prefer this option.

# Sequence of arches

## Alignment stage

Straight-Arch-Form



Euro-Smile-Form



€ 0297



description	Maxillary	Mandibular	Maxillary	Mandibular	Profile	Force	ø Inch	Cont.
BioStarter*	203-0825	203-0925	203-1825	203-1925	●	20 g	.010	10
	203-0830	203-0930	203-1830	203-1930		30 g	.012	10
	203-0835	203-0935	203-1835	203-1935		40 g	.014	10
	203-0845	203-0945	203-1845	203-1945		70 g	.018	10
BioTorque*	203-2048	203-2148	203-4048	203-4148	■	170 g	.019 x .025	10

## Working stage

€ 0297



description	Order no.	Profile	Size	ø Inch	Content
Stainless steel arch wires 4-loop	254-2640	■	26 mm	.016 x .022	10
	254-2840		28 mm	.016 x .022	10
	254-3040		30 mm	.016 x .022	10
	254-3240		32 mm	.016 x .022	10
	254-2648		26 mm	.019 x .025	10
	254-2848		28 mm	.019 x .025	10
	254-3048		30 mm	.019 x .025	10
	254-3248		32 mm	.019 x .025	10
	254-3448		34 mm	.019 x .025	10
	254-3648		36 mm	.019 x .025	10
	254-3848		38 mm	.019 x .025	10
	254-4048		40 mm	.019 x .025	10

## Working stage

Straight-Arch-Form



Euro-Smile-Form



CE 0297



Description	Straight-Arch-Form		Euro-Smile-Form		Profile	Force	ø Inch	Cont.
	Maxillary	Mandibular	Maxillary	Mandibular				
Stainless steel arch wires	202-3748	202-3848	201-3748	201-3848	■	-	.019 x .025	10

description	Order no.	profile	size	ø inch	content
<p>TMA T-Loop archwire</p>	256-2648	■	26 mm	.019 x .025	5
	256-2848		28 mm	.019 x .025	5
	256-3048		30 mm	.019 x .025	5
	256-3248		32 mm	.019 x .025	5
	256-3448		34 mm	.019 x .025	5
	256-3648		36 mm	.019 x .025	5
	256-3848		38 mm	.019 x .025	5
	256-4048		40 mm	.019 x .025	5

<p>Stainless Steel posted archwire</p>	255-2648	■	26 mm	.019 x .025	10
	255-2848		28 mm	.019 x .025	10
	255-3048		30 mm	.019 x .025	10
	255-3248		32 mm	.019 x .025	10
	255-3448		34 mm	.019 x .025	10
	255-3648		36 mm	.019 x .025	10
	255-3848		38 mm	.019 x .025	10
	255-4048		40 mm	.019 x .025	10

## Finishing stage

CE 0297



BioFinisher*	203-2054	203-2154	203-4054	203-4154	■	140 g	.017 x .025	10
	203-2053	203-2153	203-4053	203-4153	■	200 g	.021 x .025	10
Stainless steel arch wires	202-3754	202-3854	201-3754	201-3854	■	-	.021 x .025	10
Eight strand Braided stainless steel archwire	Maxillary	Mandibular	Profile		■	ø Inch	Content	
	200-8440	200-8540						.019 x .025



## The FACE EVOLUTION VPT Tubes

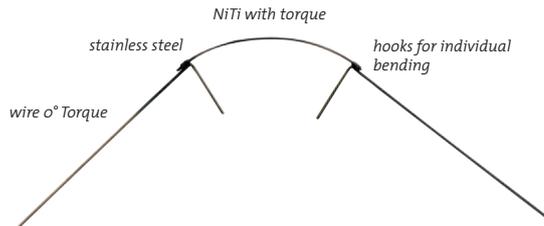
(Variable Prescription Tube. Marking available as of 2016.)

VPT FACE EVOLUTION tubes for 1<sup>st</sup> Maxillary molar enables different bonding positions, which are marked on the base of the bracket:

Variation in position	Upper Tube 1 <sup>st</sup> Molar
Minimum anchorage	6°
FACE EVOLUTION Prescription	10°
Maximum anchorage	14°

In this way the same tube with the FACE EVOLUTION prescription serves as a “working bracket” for different situations throughout treatment. Several prescriptions in the same tube mean versatility and a reduced inventory.

## Special Auxiliaries Retraction and torque arch\*



The retraction and torque arch wire is used for bodily retraction and torquing of anterior teeth.

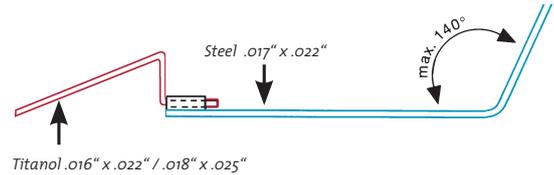
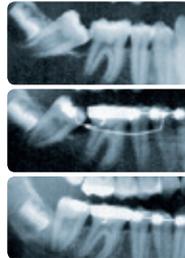
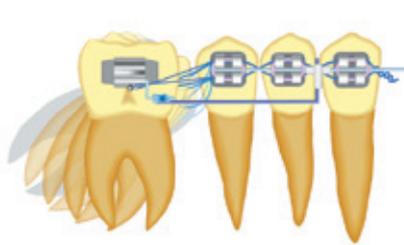


CE 0297

Order no.	anterior segment	torque	lateral segment	technique	content
210-3040	.016 x .022	30°	.017 x .022	.018	1
210-2040	.016 x .022	45°	.017 x .022	.018	1
210-2044	.017 x .025	30°	.017 x .022	.022	1
210-2046	.018 x .025	45°	.017 x .022	.022	1
311-1030			Titanol Instant tension spring	12 mm	10
311-1031				18 mm	
654-0001			Plastic protection tube for tension spring		1
732-0005			Torque key	.018	1
732-0006				.022	

\*acc. to Prof. Dr. F. G. Sander

Memory Titanol® Spring for uprighting of the molars\*



**Uprighting spring**  
 By using the superelastic Titanol® wire with its Martensite plateau a biological favourable low force is effective to the uprighting of the molars.

\*acc. to Prof. Dr. F. G. Sander

Order no.		content	description
Slot .018	Slot .022		
307-1011	307-1013	10 + 10	Set with cross tube
307-1010	307-1012	10	Uprighting spring
760-0062	760-0063	10	Cross tube
.016" x .016"	307-1009	10	Molar-Uprighting spring (.016" x .016" – Stiff) High resilient, for the auxilliary slot of the Quick brackets



**Collar probe**

For all brackets of the Quick range  
(Attention: Quicklear only to be used  
from vestibular!)

Order no. 501-1843



**Classic opening instrument,  
double sided**

Order no. C501-1842



**Two-pronged probe**

For opening by rotary movement, two-sided,  
(straight prong tip/angled collar tip)

Order no. 501-1844



**Archwire-Director**

Order no. 501-0861



**Bracket removing plier**

with plastic insert, disinfectable, sterilisable

Order no. 501-0815

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