



**Look no further**



# The Butterfly System

LOW PROFILE VERTICAL SLOT BRACKETS

Dr. S. Jay Bowman

# The Butterfly System™

"In 1996, the American Board of Orthodontists reported on the common mistakes found in case reports failing Phase III examination. As some type of preadjusted appliance was often used, some shortcomings of existing straightwire concepts may warrant improvements".

Dr. Jay Bowman

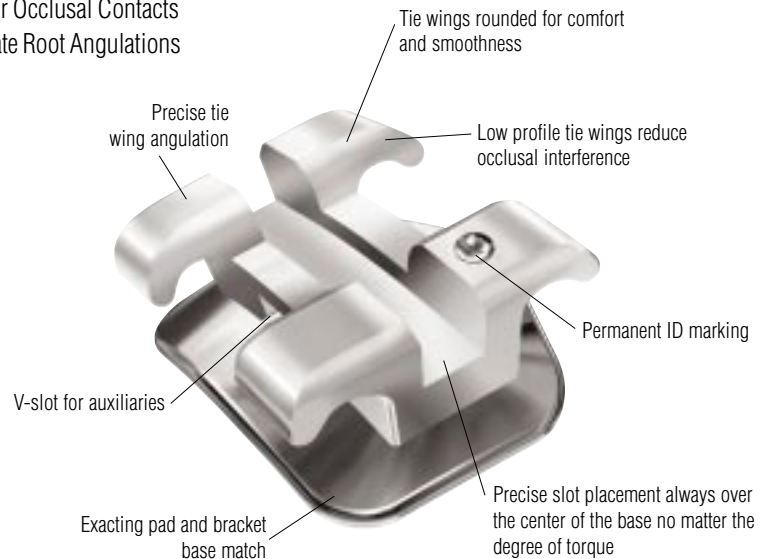


The six problems reported by the American Board of Orthodontists in the November 1996 issue of the American Journal of Orthodontics and Dentofacial Orthopedics are:

- ◇ Improper Buccolingual Inclinations
- ◇ Alignment Errors
- ◇ Incorrect Marginal Ridge Relationships
- ◇ Excessive Anterior and Posterior Overjets
- ◇ Improper Occlusal Contacts
- ◇ Inaccurate Root Angulations

The Butterfly System uses **low profile, vertical slot** brackets to achieve superior results

- Diagonal Torque
- Diagonal Angulation
- Optional Offset Bracket bases
- Added comfort and versatility

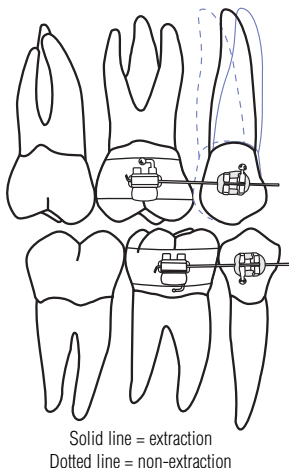


The Butterfly System improves upon the straightwire concept with seven unique features

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## PROGRESSIVE POSTERIOR TORQUE

To address the mistakes in buccolingual inclinations as cited by the ABO, the Butterfly System increases maxillary torque in molars to  $-14^\circ$  and decreases mandibular torque to  $-10^\circ$  (or an optional  $0^\circ$ ), thereby improving buccolingual occlusion, minimizing posterior overjet, decreasing the Curve of Wilson, and reducing the prominence of palatal roots.



Solid line = extraction  
Dotted line = non-extraction



Dotted line = ideal Curve of Wilson  
Solid line = NOT ideal Curve of Wilson

2

## REVERSIBLE SECOND PREMOLAR ROOT ANGULATION

Regarding the ABO concerns for incorrect root paralleling, the Butterfly System incorporates the added versatility of reversible 2nd premolar brackets. Distal root tip in the 2nd premolars reduces differences in marginal ridge heights in nonextraction mechanics. In extraction cases, the 2nd premolar brackets may be reversed to the contralateral side for positive root angulation during cuspid retraction.



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### PREVENTATIVE MANDIBULAR ANTERIOR TORQUE

The Butterfly System promotes lingual crown torque of  $-5^\circ$  to resist the inherent labial tipping of incisors during leveling. An optional  $-10^\circ$  of lingual crown torque is recommended to reduce labial tipping from Class II elastics or fixed functional appliances such as Jasper Jumpers.

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### MANDIBULAR ANTERIOR PROGRESSIVE ANGULATION

To address concerns regarding anterior root paralleling, the Butterfly System incorporates  $2^\circ$  mesial crown tip for the central incisors and  $5^\circ$  mesial crown tip for the lateral incisors.



Incorrect lateral angulation



5

### CONVERTIBLE TUBES WITH $-6^\circ$ ANGULATION

Adding  $-6^\circ$  angulation when welding buccal tubes on maxillary first molar bands helps to compensate for the molar's difference in mesial and distal marginal ridge heights, which is one of the common mistakes found in finished cases by the ABO. Other benefits of band assemblies with  $-6^\circ$  molar tip are the positive effect they have upon tip-back anchorage, the minimization of band positioning errors, and the preclusion of mesially tipped molars. Convertible triple tubes are recommended to facilitate sectional mechanics and Jasper Jumpers.

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### VERTICAL SLOT FOR CONVENIENCE AND VERSATILITY

The convenience of a low profile bracket with a vertical slot allows for a more hygienic and comfortable appliance for your patient. The Butterfly System incorporates a number of auxiliaries to give you control in all three planes. The vertical slot also offers the convenience of tying in severely rotated or misaligned teeth using only the slot.



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### A VERSATILE SYSTEM

The Butterfly System is easily adaptable to both extraction and nonextraction mechanics and a variety of treatment methods. The Butterfly System directly addresses common mistakes cited by the ABO, and seeks to improve upon the straightwire concept as originally designed by Larry Andrews. Final adjustments are necessary in any preadjusted appliance. Beta Titanium wire is highly recommended for the final stage of treatment and is the perfect compliment for final adjustments in posterior torque. Beta Titanium wire offers the perfect combination of patient comfort and third order precision.

# THE BUTTERFLY SYSTEM - Low Profile Vertical Slot

## MAXILLARY

TOOTH	TORQUE	ANGULATION	ROTATION	.018	.022
Central	+14	+5	0	393-6001 R 393-6002 L	393-6041 R 393-6042 L
Lateral	+8	+9	0	393-6003 R 393-6004 L	393-6043 R 393-6044 L
Cuspid	0	+9	0	393-6005 R 393-6006 L	393-6045 R 393-6046 L
With hook				393-6005B R 393-6006B L	393-6045B R 393-6046B L
1st Bicuspid	-7	0	0	393-8607 R/L	393-8647 R/L
With hook				393-8608B R 393-8609B L	393-8648B R 393-8649B L
2nd Bicuspid	-8	-3	0	393-8617 R 393-8618 L	393-8657 R 393-8658 L
With hook				393-8617B R 393-8618B L	393-857B R 393-8658B L
1st Molar Triple Convertible	-14	-6 on band	8	004-682C R 004-683C L	004-684C R 004-685C L
2nd Molar	-14	0 <sup>B</sup>	7	004-552C R 004-553C L	004-554C R 004-555C L

## MANDIBULAR

TOOTH	TORQUE	ANGULATION	ROTATION	.018	.022
Central	-5	+2	0	393-6010 R 393-6011 L	393-6050 R 393-6051 L
	-10	+2	0	393-6012 R 393-6013 L	393-6052 R 393-6053L
Lateral	-5	+5	0	393-6014 R 393-6015 L	393-6054 R 393-6055 L
	-10	+5	0	393-6016 R 393-6017 L	393-6056 R 393-6057 L
Cuspid	-3	+6	3	393-6018 R 393-6019 L	393-6058 R 393-6059 L
With hook				393-6018B R 393-6019B L	393-6058B R 393-6059B L
1st Bicuspid <sup>A</sup>	-7	0	0	393-8620 R 393-8621 L	393-8660 R 393-8661 L
With hook				393-8620B R 393-8621B L	393-8660B R 393-8661B L
2nd Bicuspid <sup>A</sup>	-9	-3	0	393-8622 R 393-8623 L	393-8662 R 393-8663 L
With hook				393-8622B R 393-8623B L	393-8662B R 393-8663B L
1st Molar Double Convertible	-10	-6 on band	6 <sup>C</sup>	004-634CM R 004-635CM L	004-636CM R 004-637CM L
	0	-6 on band	6 <sup>C</sup>	004-630CM R 004-631CM L	004-632CM R 004-633CM L
2nd Molar	-10	0 <sup>B</sup>	7 <sup>C</sup>	004-541C R 004-540C L	004-543C R 004-542C L
	0	0 <sup>B</sup>	7 <sup>C</sup>	004-536C R 004-537C L	004-538C R 004-539C L

<sup>A</sup> Optional offset pad available

<sup>B</sup> Optional -6° angulation on 2nd molar band available

<sup>C</sup> Optional 0° rotation on lower bands available