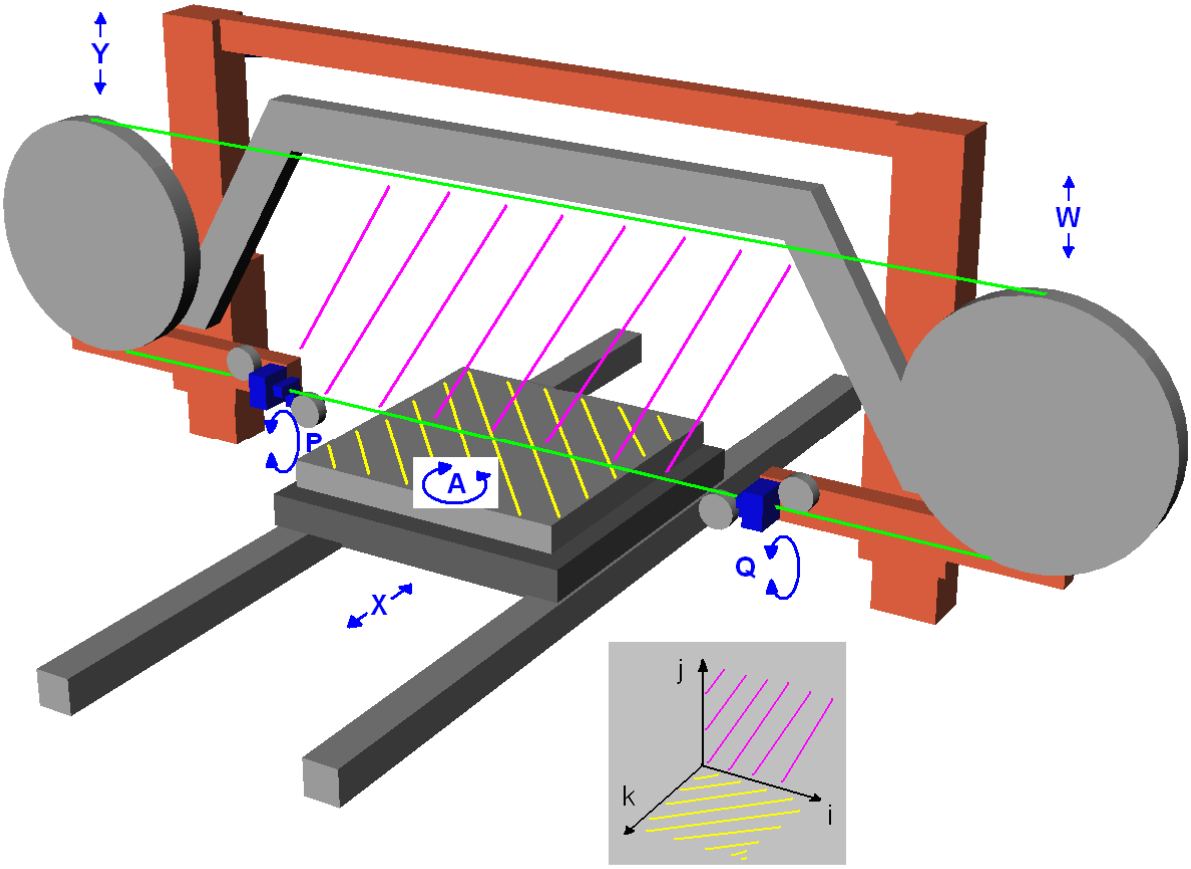
CONTOURING MACHINE MICHELETTI



Axis nomenclature

AXIS	W	Y	X	A	P	Q
6 AXIS	•	•	•	•	•	•
5 AXIS	•		•	•	•	•
4 AXIS	•		•		•	•

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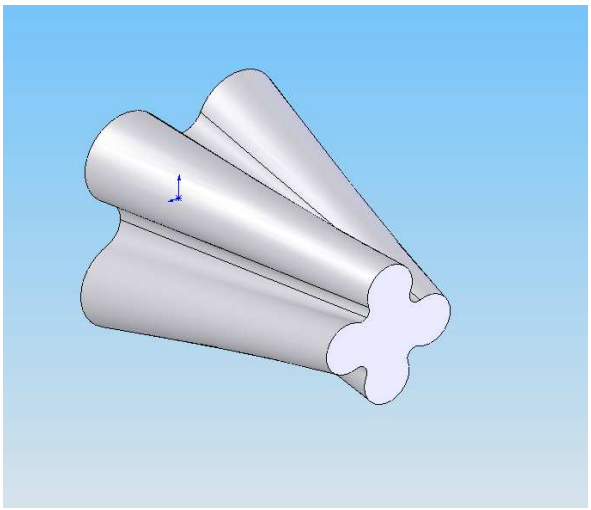
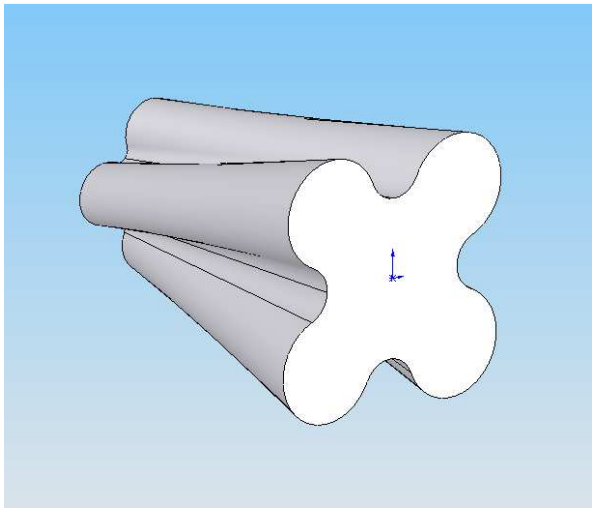
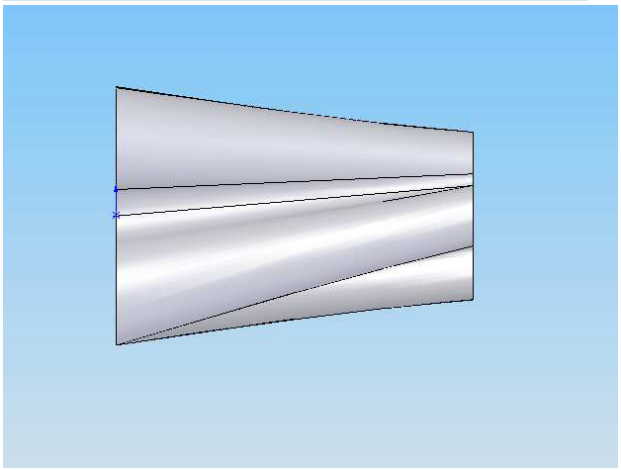
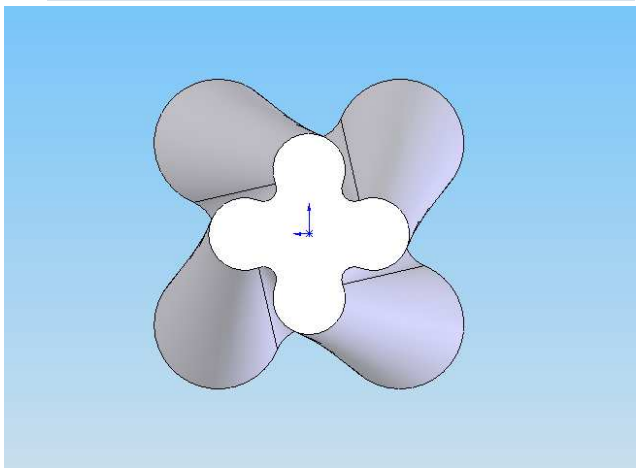
6 AXIS

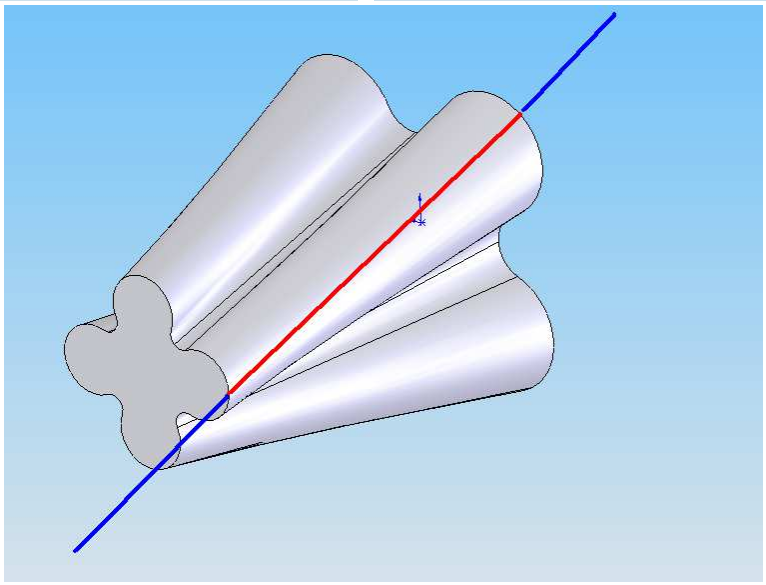
A diamond wire 6 axis machine can perform geometric shapes where the generatrix (wire diamond) can assume any angle in the mechanical limits of the machine.









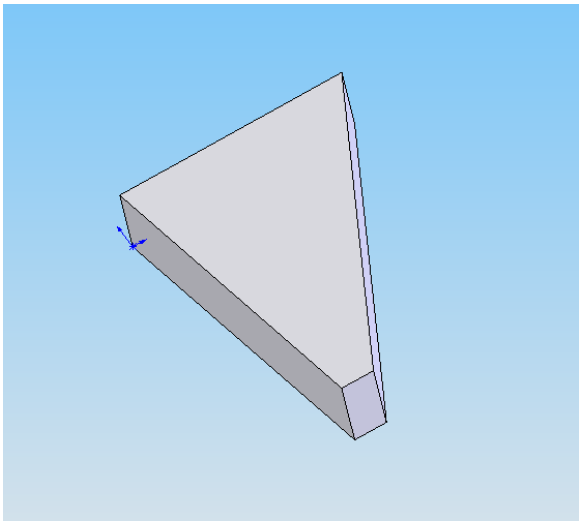


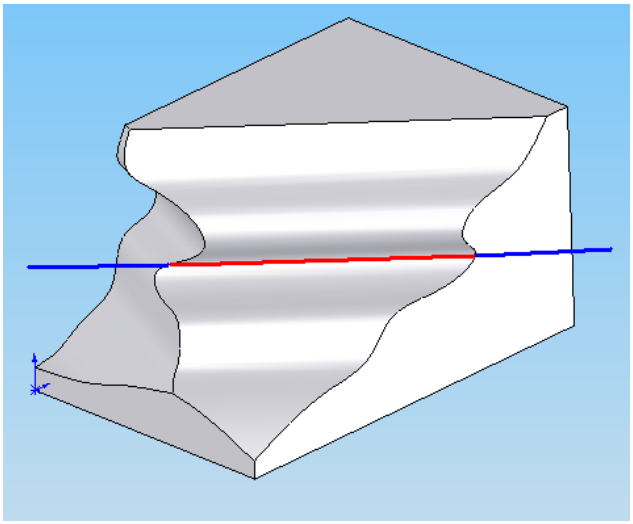
Exemple of a position of the generatrix (wire) during the cut

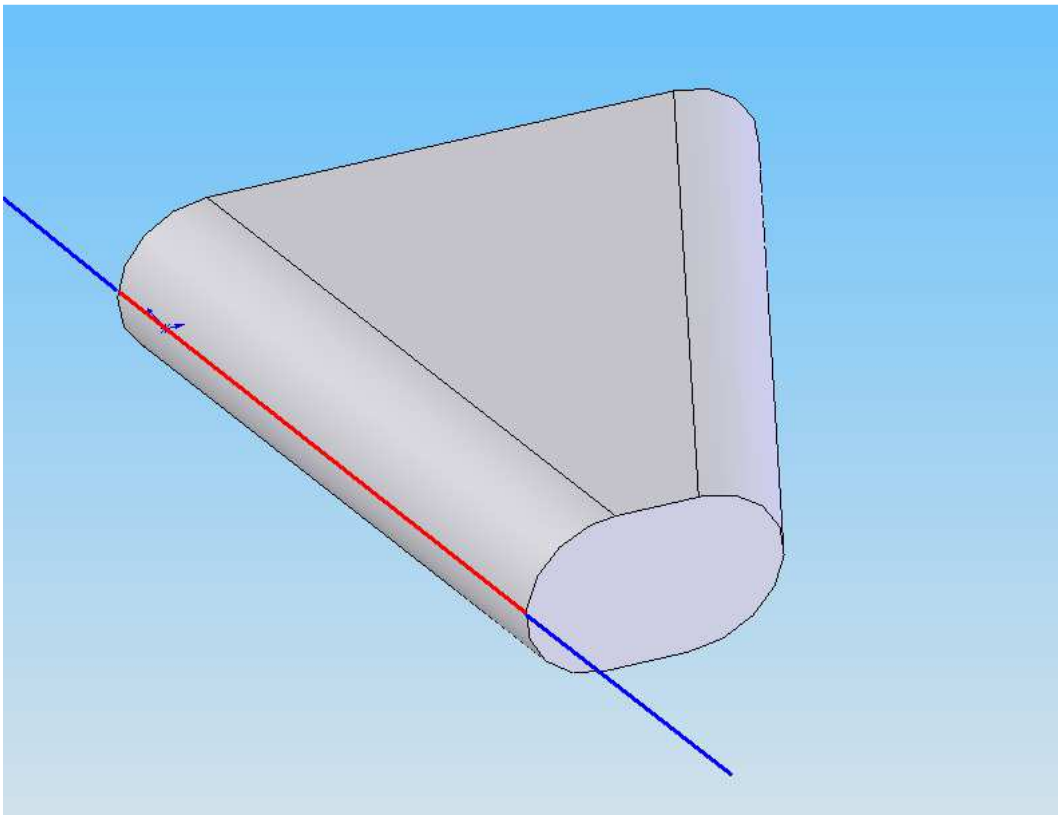
5 AXIS

A diamond wire 5 axis machine derives from a 6 axis machine with following changes:
Elimination of the flywheels inclination by moving together the axis **W** and **Y** with the same sizes.

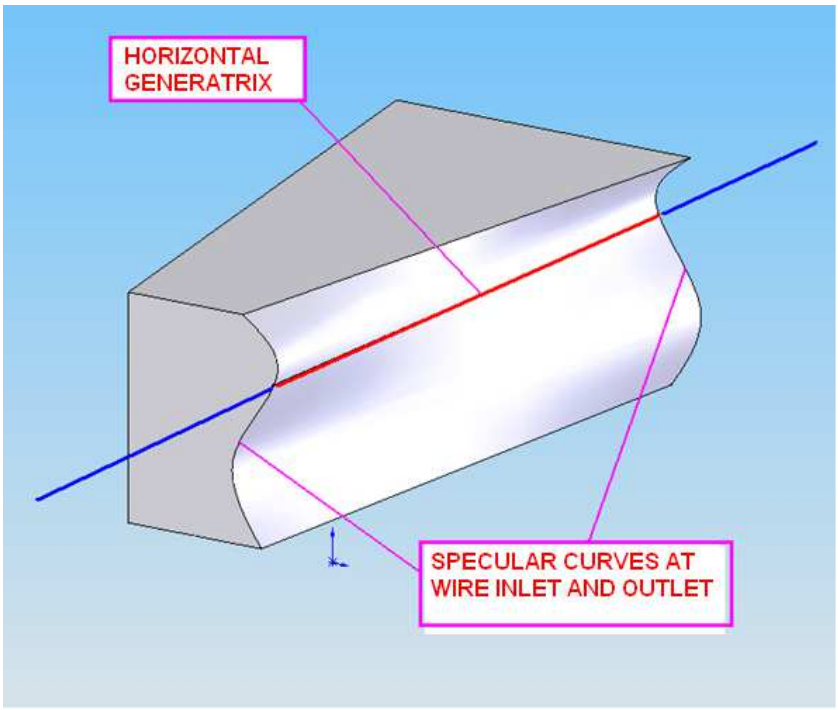
By eliminating the flywheels inclination (**W**=**Y**) it is possible to process all the shapes as a 6 axis machine except for the ones which involves a generatrix inclination on plane <**ij**> (plane patterned in purple).
Even complex form cuts can be performed provided that the generatrix (wire) does not tilt on the plane <ij> (the wire must constantly lie on a plane parallel to <**ik**> plane (plane patterned in yellow).



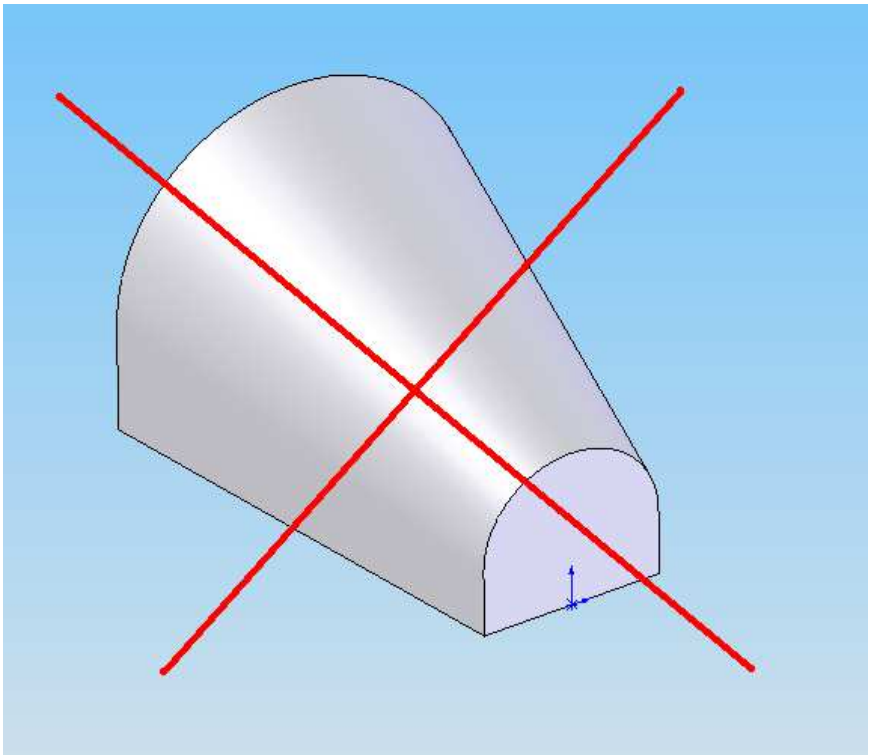




Cone-like shapes can be also performed when the cut ends follow a path specular or similar to a plane vertical parallel to the plane <**ij**> (purple).



All the shapes involving a generatrix inclination on the plane <ij> can not be performed.

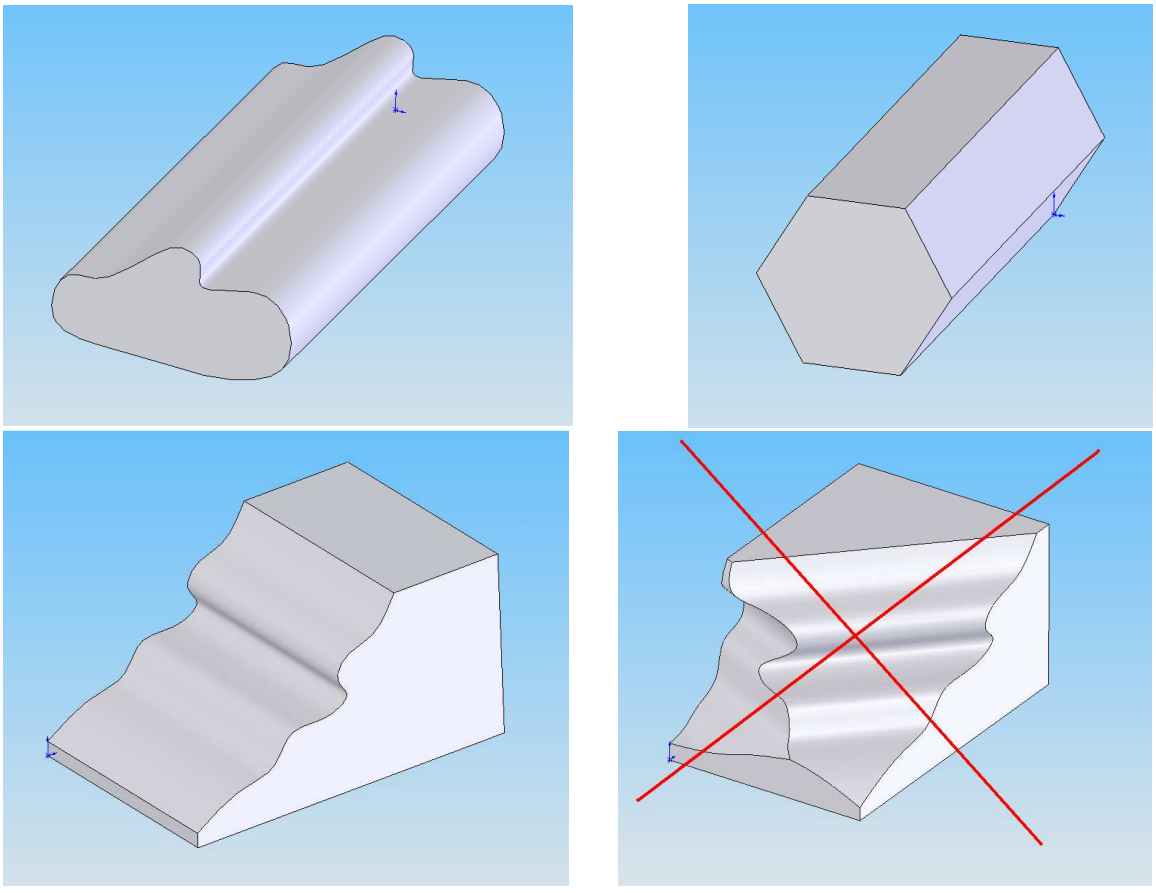


4 AXIS

A diamond wire 4 axis machine derives from a 6 axis machine with following changes:

elimination of the flywheels inclination by moving together the axis **W** and **Y** with the same sizes;
elimination of the table rotation **A**.

By eliminating those axes it will be not possible to perform the shapes involving any wire inclination on the planes <ij> and <ik>.
Only **CYLINDRICAL** cuts can be performed, that is the ones with constant section of the piece thickness (the section of the input and output of the wire are identical).
It is not possible to perform two subsequent cuts by rotating the table. The rotation of the piece should be made by repositioning it on the table with all the inaccuracies that this operation involves.



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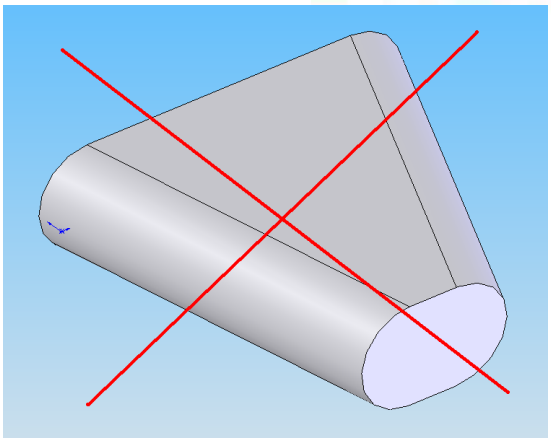

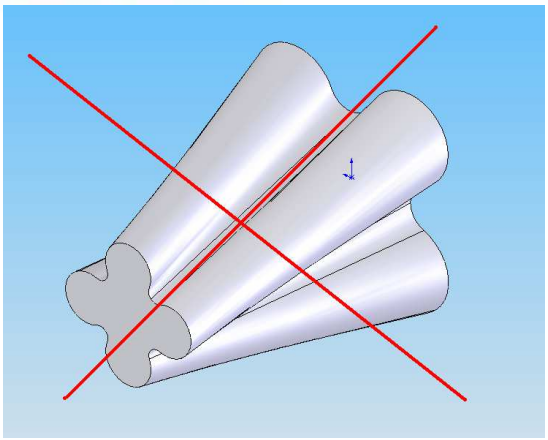

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