
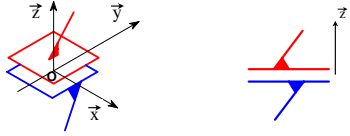
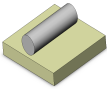
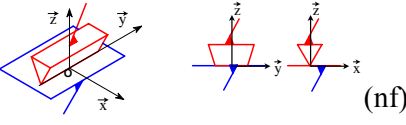
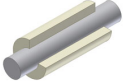
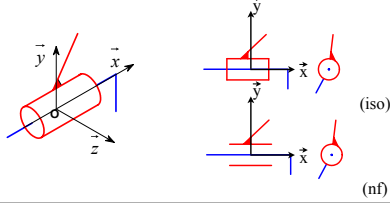


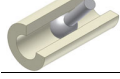
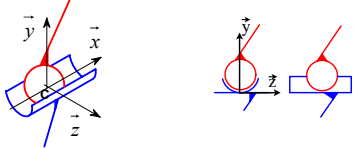

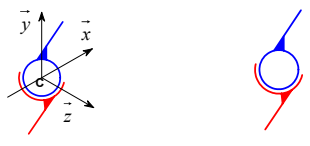
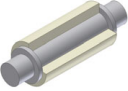
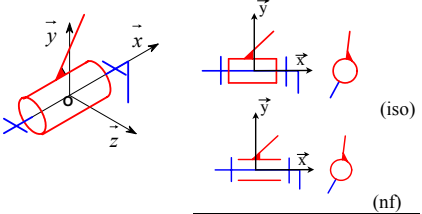
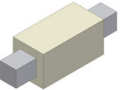
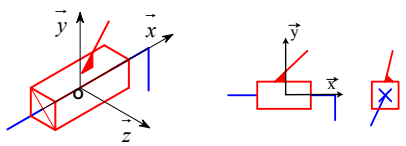
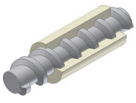
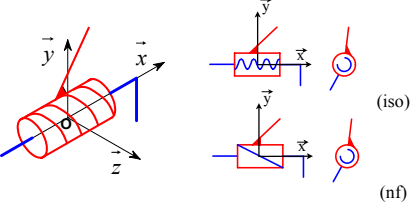

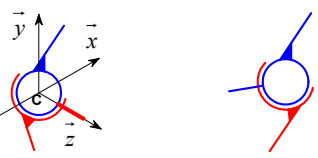
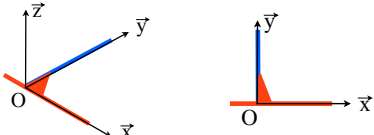
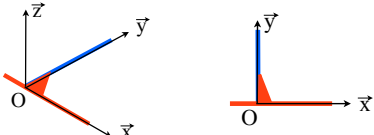


Surfaces en contact	Nom de la liaison	Schématisation Vue isométrique / Vues projetées	Degrés de liberté / Torseur cinématique
Plan/Plan	Liaison appui-plan 		2 translations / 1 rotation $\{V_{2/1}\} = \underset{\forall M \in (\vec{x}, \vec{y}, \vec{z})}{\begin{Bmatrix} 0 & v_x \\ 0 & v_y \\ \omega_z & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$
Cylindre/plan	Liaison linéaire-rectiligne 		2 translations / 2 rotations $\{V_{2/1}\} = \underset{\forall M \in (O, \vec{y}, \vec{z})}{\begin{Bmatrix} 0 & v_x \\ \omega_y & v_y \\ \omega_z & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$ (nf)
Cylindre/cylindre	Liaison pivot-glissant 		1 translation / 1 rotation $\{V_{2/1}\} = \underset{\forall M \in (O, \vec{x})}{\begin{Bmatrix} \omega_x & v_x \\ 0 & 0 \\ 0 & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$
Sphère/plan	Liaison ponctuelle ou sphère-plan 		2 translations / 3 rotations $\{V_{2/1}\} = \underset{\forall M \in (I, \vec{z})}{\begin{Bmatrix} \omega_x & v_x \\ \omega_y & v_y \\ \omega_z & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$
Sphère/cylindre	Liaison linéaire-annulaire ou sphère-cylindre 		1 translation / 3 rotations $\{V_{2/1}\} = \underset{C}{\begin{Bmatrix} \omega_x & v_x \\ \omega_y & 0 \\ \omega_z & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$
Sphère/sphère	Liaison rotule ou sphérique 		0 translation / 3 rotations $\{V_{2/1}\} = \underset{C}{\begin{Bmatrix} \omega_x & 0 \\ \omega_y & 0 \\ \omega_z & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$
Composée : cylindre/ cylindre et plan/plan	Liaison pivot 		0 translation / 1 rotation $\{V_{2/1}\} = \underset{\forall M \in (O, \vec{x})}{\begin{Bmatrix} \omega_x & 0 \\ 0 & 0 \\ 0 & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$
Composée : plan/plan et plan/plan	Liaison glissière 		1 translation / 0 rotation $\{V_{2/1}\} = \underset{\forall M}{\begin{Bmatrix} 0 & v_x \\ 0 & 0 \\ 0 & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$
Hélicoïde/ hélicoïde	Liaison hélicoïdale 		1 translation liée à 1 rotation $\{V_{2/1}\} = \underset{\forall M \in (O, \vec{x})}{\begin{Bmatrix} \omega_x & v_x \\ 0 & 0 \\ 0 & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$ Avec $v_x = \frac{p}{2\pi} \omega_x$
Composée : sphère/ sphère et cylindre/ plan	Liaison sphérique à doigt 		0 translation / 2 rotations $\{V_{2/1}\} = \underset{C}{\begin{Bmatrix} \omega_x & 0 \\ 0 & 0 \\ \omega_z & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$
	Liaison encastrement 		0 translation / 0 rotation $\{V_{2/1}\} = \underset{\forall M}{\begin{Bmatrix} 0 & 0 \\ 0 & 0 \\ 0 & 0 \end{Bmatrix}}_{(\vec{x}, \vec{y}, \vec{z})}$