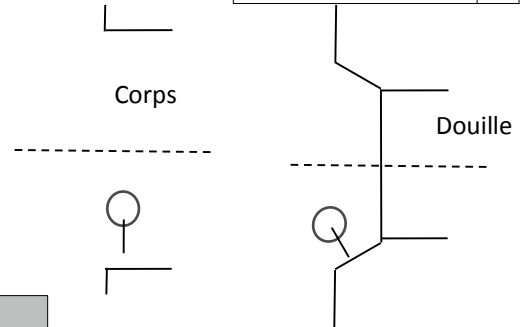


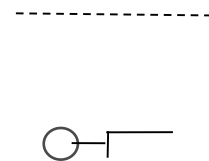
|                    |   |
|--------------------|---|
| Diagnostic         | X |
| Remise en état     |   |
| Machine de niveaux | X |

Concentricité corps et douille  
de la broche contre broche et canon  
*Body and socket concentricity of the spindle  
counter-spindle and cannon*



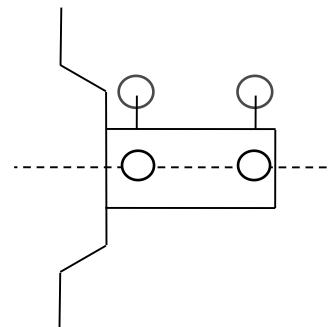
| Tolérance RD  | Broche | Contre broche | Canon |
|---------------|--------|---------------|-------|
| Corps 0,010   | 0.006  | 0.002         | 0.004 |
| Douille 0,010 | 0.012  | 0.008         | NA    |

Parallélisme face broche et contre broche  
par rapport axe X  
*Spindle & counter-spindle face parallelism in relation to axis  
X*



| Tolérance RD | Broche | Contre broche |
|--------------|--------|---------------|
| 0,040/200    | 0.004  | 0.002         |

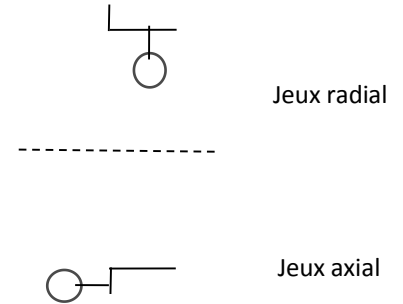
Parallélisme broche et contre broche  
par rapport axe Z selon axes X et Y  
*Spindle & counter-spindle face parallelism in relation to axis  
Z according to axes X and Y*



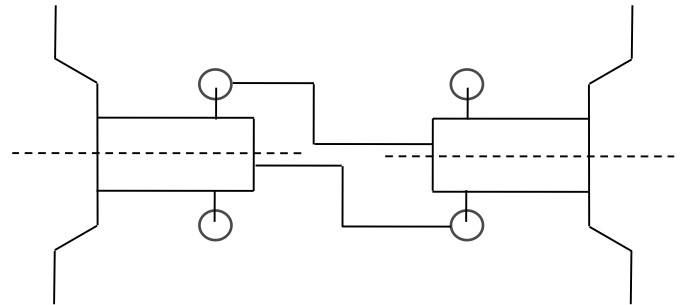
| Tolérance RD      | Broche   | Contre broche |
|-------------------|----------|---------------|
| 0,040/100 selon X | 0.008/50 | 0.010/80      |
| 0,040/100 selon Y | 0.004/80 | 0.008/80      |

Jeux mécanique broche et contre broche  
*Mechanical plays between spindle and counter-spindle*

| Tolérance RD | Broche | Contre broche |
|--------------|--------|---------------|
| Axial 0,030  | 0.004  | 0.004         |
| Radial 0,008 | 0.002  | 0.002         |

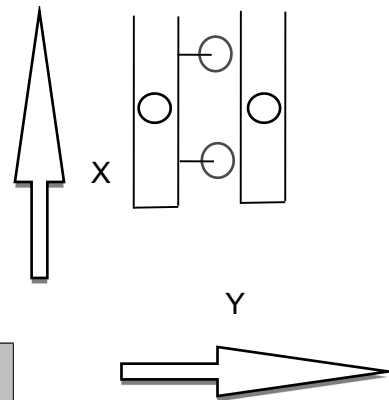


Alignement Broche Canon et contre broche  
selon axes X et Y  
*Spindle and counter-spindle alignment  
according to axes X and Y*



| Tolérance RD       | Axe X          | Axe Y          |
|--------------------|----------------|----------------|
| Broche/Canon 0,025 | <b>A Faire</b> | <b>A Faire</b> |
| Broche/Canon 0,015 | <b>A Faire</b> | <b>A Faire</b> |

Parallélisme Peigne 1 porte outils  
Axes X et Y  
*Tool holder parallelism axes X and Y*

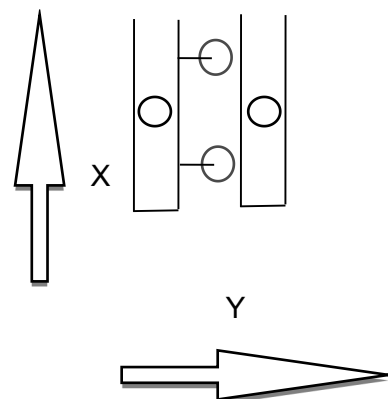


| Tolérance RD | Canal 1 X | Canal 1 Y | Canal 2 X    | Canal 2 Y    |
|--------------|-----------|-----------|--------------|--------------|
| 0.015/30     | 0.006/40  | 0.004/40  | <b>NA/60</b> | <b>NA/60</b> |

Parallélisme Peigne 1 outils tournant  
axes X et Y

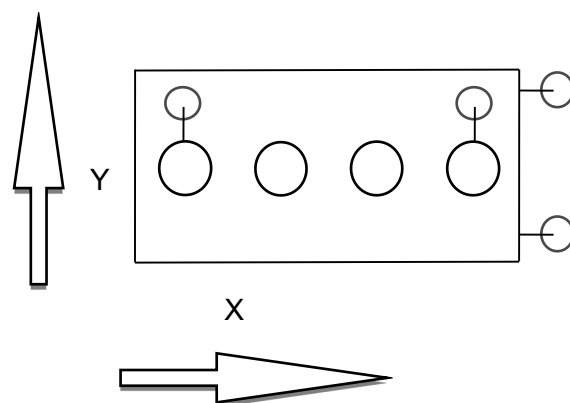
*Driven tool parallelism axes X and Y*

| Tolérance RD | Canal 1 X | Canal 1 Y | Canal 2 X | Canal 2 Y |
|--------------|-----------|-----------|-----------|-----------|
| 0.015/30     | 0.004/40  | 0.002/100 | NA/40     | NA/40     |



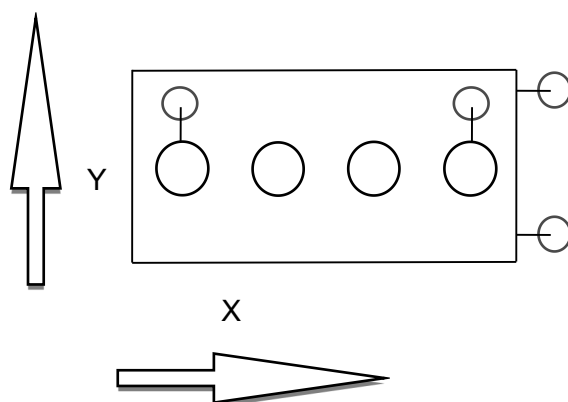
Parallélisme porte outils contre broche  
axes X et Y / Z  
*Counter-spindle tool holder parallelism axes X and Y / Z*

| Tolérance RD | Canal 3 X | Canal 3 Y | Canal 2 X | Canal 2 Y |
|--------------|-----------|-----------|-----------|-----------|
| 0.015/30     | NA/40     | NA/40     | NA/40     | NA/40     |



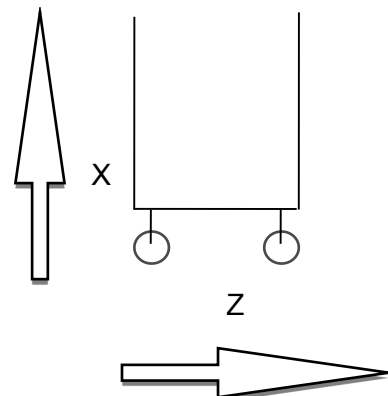
Parallélisme porte outils contre opération  
axes X et Y / Z  
*Counter-operation tool holder parallelism axes X and Y / Z*

| Tolérance RD | Canal 1 X | Canal 1 Y | Canal 2 X | Canal 2 Y |
|--------------|-----------|-----------|-----------|-----------|
| 0.015/30     | 0.004/100 | 0.080/100 | NA/40     | NA/40     |



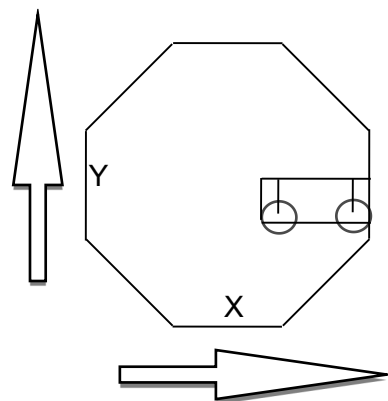
Parallélisme tourelle axe Z  
*Turret parallelism axis Z*

| Tolérance RD | Tourelle 1 | Tourelle 2 |
|--------------|------------|------------|
| 0,025/50     | NA         | 0.004/80   |



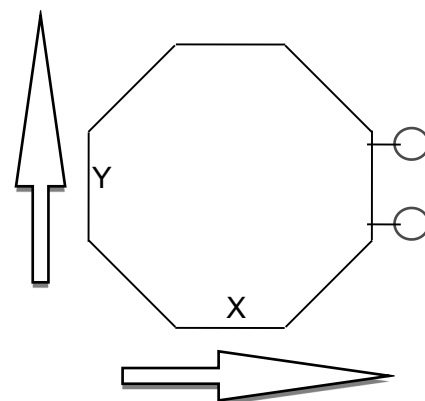
Hauteur de point // avec axe X  
*Tip height // with axis X*

| Tolérance RD | Tourelle 1 | Tourelle 2 |
|--------------|------------|------------|
| 0,025/100    | NA         | 0.008/50   |



Parallelisme tourelle axe Y  
*Turret parallelism axis Y*

| Tolérance RD | Tourelle 1 | Tourelle 2 |
|--------------|------------|------------|
| 0,025/50     | NA         | 0.008/60   |

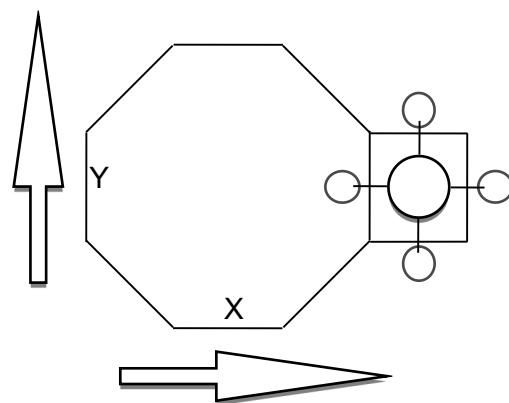


Alignement tourelle axe X et Y avec broche ou contre  
broche

Alignement avec référence

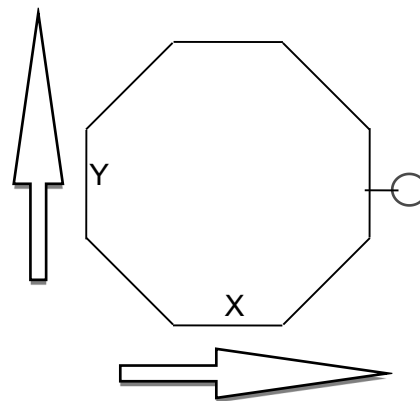
*Turret alignment axis X and Y with spindle or  
counter-spindle*

*Alignment with reference*



| Tolérance RD | T1 Broche | T1 Contre broche | T2 Broche | T2 Contre broche |
|--------------|-----------|------------------|-----------|------------------|
| Axe X 0,025  | NA        | NA               | A Faire   | A Faire          |
| Axe Y 0,025  | NA        | NA               | A Faire   | A Faire          |

Jeux inversion  
Relever paramètre 32450  
Mettre paramètre inversion à zéro  
Régler jeux inversion  
Contrôle jeux mécanique  
*Inversion plays*  
*Take the measurement of parameter 32450*  
*Put inversion parameter back to 0*  
*Adjust inversion plays*  
*Control mechanical plays*



| Tolérance RD | C 1 Valeur para | C 1 Jeux | C 1 Jeux méca | C 2 Valeur para | C 2 Jeux     | C 2 Jeux méca | C 3 Valeur para | C 3 Jeux | C 3 Jeux méca |
|--------------|-----------------|----------|---------------|-----------------|--------------|---------------|-----------------|----------|---------------|
| X 0,065      | 0               | 0.006    | 0.004         | 0               | 0.006        | 0.002         | 0               | 0.008    | 0.004         |
| Y 0,065      | 0               | 0.006    | 0.004         | 0               | <b>0.030</b> | <b>0.012</b>  | NA              | NA       | NA            |
| Z 0,065      | 0               | 0.006    | 0.004         | 0               | 0.006        | 0.004         | 0               | 0.008    | 0.006         |
|              |                 |          |               |                 |              |               |                 |          |               |

NM le 25/5/2018

**VALIDÉ**