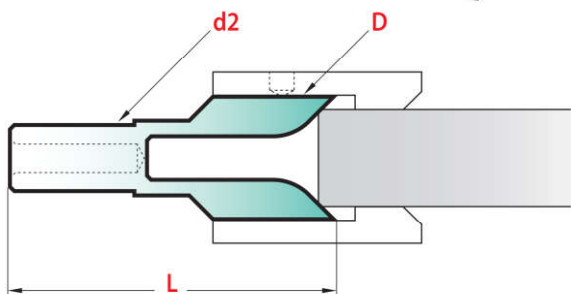




Inter-Exter

ÉBAVUREURS 90° DEBURRERS AVELLANADORES SBAVATORI 90°

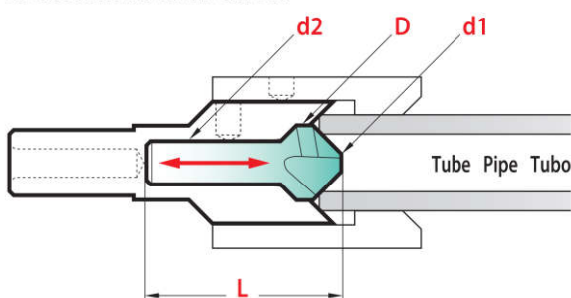


Utilisation de la fraise seule, pour chanfreiner les extrémités de barres ou tubes.

Using the exter cutter alone, to chamfer bar ends.

Utilización de la fresa sólo para chaflanar las extremidades de las barras.

Impiego del singolo svasatore per sbavare le estremità delle barre.

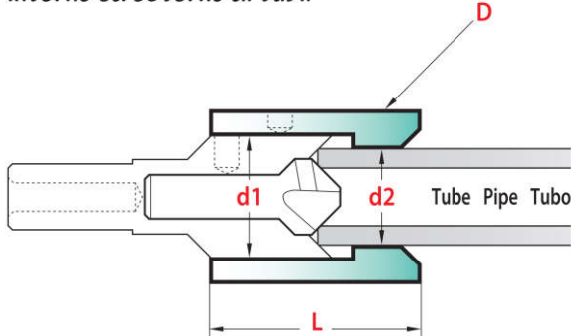


Utilisation simultanée des deux fraises, pour l'ébavurage inter-exter de tubes.

Two cutters simultaneously used, to produce inter-exter chamfers in tubes.

Son utilizadas dos fresas simultáneamente para producir chaflanes internos y externos de tubos.

Impiego simultaneo di due frese, per sbavare interno ed esterno di tubi.



Le centreur permet la position dans l'axe de petits tubes, présentés à la main.

The centering guide aids location and axial guidance on small tube with hand use.

El centrador permite posicionar en el eje pequeños tubos.

La bussola consente il posizionamento in asse di piccoli tubi inseriti manualmente.

90°

| 407 | Exter | Externo | Esterno | HSS-E COBALT | |
|----------------|------------------|-------------------|------------|-------------------|---------|
| | D | 15 | 32 | 50 | |
| | d2 | 12 | 12 | 16 ⁽¹⁾ | |
| | L | 50 | 88 | 135 | |
| Capacité Exter | Capacity Externo | Capacidad Externo | 5,2 ~ 13,5 | 12,2 ~ 30 | 18 ~ 48 |

90°

| 408 | Inter | Interno | HSS-E COBALT | | |
|----------------|------------------|-------------------|--------------|-----------|---------|
| | D | 11 | 31 | 50 | |
| | d1 | 2 | 10 | 20 | |
| | d2 | 5 | 12 | 12 | |
| | L | 38 | 52 | 72 | |
| Capacité Inter | Capacity Interno | Capacidad Interno | 2,0 ~ 11,0 | 10,0 ~ 31 | 20 ~ 50 |
| Exter | Externo | Esterno | 5,2 ~ 13,5 | 12,2 ~ 30 | 18 ~ 48 |

| 409 | Guide | Centrador | Bussola di guida |
|-----|-------------------|-----------|------------------|
| | D | 25 | 44 |
| | d1 | 15 | 32 |
| | d2 ⁽²⁾ | 6,2 | 14,2 |
| | L | 35 | 50 |

(1) Queue avec 3 plats = serrage efficace.
3 flatted shanks = effective holding.
Mango con 3 planos = sujeción eficaz.
Codolo con 3 piani = miglior serraggio.

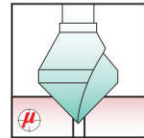
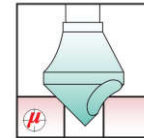
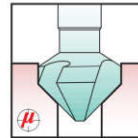
(2) L'utilisateur agrandira d2 en fonction du Ø du tube et de la surépaisseur liée aux bavures extérieures.
The user will enlarge d2 with regard to the pipe Ø and over size due to the burrs.
El operario aumentará d2 en función del Ø del tubo y de la sobremetida respecto a las rebabas exteriores.
L'utilizzatore allargherà d2 in funzione del Ø del tubo e del sovrametallo dovuto alla bava esterna.



performances

Vc = vitesse speed velocidad velocidad = m/min.
 Vf = avance feed avance avanzamento = mm/min.
 $\frac{Vc \times 1000}{\pi \times \varnothing} =$ Tours par min. Rev. / min.
 Giri / min. revoluciones por minuto.

ÉBAVURAGE - CHANFREINAGE DEBURRING - COUNTERSINKING DESBARBADO - AVELLANADO SVASATURA - SBAVATURA



Recommandation
 Recomendación
 Suggestimento

N° 1

N° 2

Autres
 Otros
 Others
 Altre soluzioni

| MATIÈRE MATERIAL MATERIALE | | HSS-Co | HSS-Co + TiN | HSS 8% Co | HSS 8% Co + Red'X | Carbure Carbide Metallo Duro | Carbure Carbide + Hard'X | HSS-Co | HSS-Co + TiN | HSS-Co | HSS-Co + TiN |
|---|--------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------------------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Pages Páginas Pagina | | 47 ~ 57 | | 49 | | 49 ~ 56 | | 60 - 61 | | 62 - 63 | |
| Aciers Steels Aceros Acciai ≤ 500 N/mm ² | Vc Ø 10 Vf Ø 30 | 17~22 85 45 30 | 17~22 85 45 30 | 35~45 165 85 55 | 35~45 165 85 55 | 40~80 250 125 85 | 40~80 250 125 85 | 35~45 165 85 55 | 35~45 165 85 55 | 35~45 165 85 55 | 35~45 165 85 55 |
| Aciers Steels Aceros Acciai 500 ~ 800 N/mm ² | Vc Ø 10 Vf Ø 30 | 10~15 60 30 20 | 10~15 60 30 20 | 20~30 110 55 35 | 20~30 110 55 35 | 30~60 170 85 60 | 30~60 170 85 60 | 20~30 110 55 35 | 20~30 110 55 35 | 20~30 110 55 35 | 20~30 110 55 35 |
| Aciers Steels Aceros Acciai 800 ~ 1000 N/mm ² | Vc Ø 10 Vf Ø 30 | 8~12 35 25 15 | 8~12 35 25 15 | 16~20 55 35 25 | 16~20 55 35 25 | 20~40 100 60 45 | 20~40 100 60 45 | 15~20 55 35 25 | 15~20 55 35 25 | 15~20 55 35 25 | 15~20 55 35 25 |
| Inox Stainless steel Aceros Inoxidables 1000 ~ 1300 N/mm ² | Vc Ø 10 Vf Ø 30 | 6~10 30 15 10 | 6~10 30 15 10 | 12~15 45 25 20 | 12~15 45 25 20 | 20~40 100 60 40 | 20~40 100 60 40 | 12~15 45 25 20 | 12~15 45 25 20 | 12~15 45 25 20 | 12~15 45 25 20 |
| Acier anti-abrasion Abrasive tough Steel < 420 HB Acero resistente a la abrasión | Vc Ø 10 Vf Ø 30 | | | 12~15 40 30 20 | 12~15 40 30 20 | 15~20 55 35 25 | 15~20 55 35 25 | | | | |
| Bronze dur Inconel, Nimonic Hard bronze Bronze/Bronzo duro | Vc Ø 10 Vf Ø 30 | | | 4~6 16 8 6 | 4~6 16 8 6 | 10~12 30 16 10 | 10~12 30 16 10 | | | | |
| Acier traité Treated steel ≥ 60 HRC Acero tratado Acciai trattati | Vc Ø 10 Vf Ø 30 | | | | | 8~10 20 10 8 | 10~12 30 16 10 | | | | |
| Fonte Cast iron Fundición Ghisa | Vc Ø 10 Vf Ø 30 | 15~25 70 40 30 | 15~25 70 40 30 | 20~40 125 75 50 | 20~40 125 75 50 | 40~80 250 150 100 | 40~80 250 150 100 | 20~40 125 75 50 | 20~40 125 75 50 | 20~40 125 75 50 | 20~40 125 75 50 |
| Aluminium Alluminio | Vc Ø 10 Vf Ø 30 | 35~45 200 130 110 | 35~45 200 130 110 | 50~60 255 180 150 | 50~60 255 180 150 | 40~100 350 230 200 | 40~100 350 230 200 | 50~60 255 180 150 | 50~60 255 180 150 | 50~60 255 180 150 | 50~60 255 180 150 |
| Laiton Brass Bronze Latòn - Bronce Bronzo | Vc Ø 10 Vf Ø 30 | 20~30 120 85 70 | 20~30 120 85 70 | 30~40 150 110 90 | 30~40 150 110 90 | | | 30~40 150 110 90 | 30~40 150 110 90 | 30~40 150 110 90 | 30~40 150 110 90 |
| Cuivre Copper Cobre Rame | Vc Ø 10 Vf Ø 30 | 15~25 95 60 45 | 15~25 95 60 45 | 20~30 120 80 65 | 20~30 120 80 65 | 50~80 300 200 175 | 50~80 300 200 175 | 20~30 120 80 65 | 20~30 120 80 65 | 20~30 120 80 65 | 20~30 120 80 65 |
| Stratifié Laminated Laminados Laminati | Vc Ø 10 Vf Ø 30 | 35~70 300 200 150 | 35~70 300 200 150 | 35~70 300 200 150 | 35~70 300 200 150 | | | 50~100 400 300 250 | 50~100 400 300 250 | 50~100 400 300 250 | 50~100 400 300 250 |
| Nylon PVC Plastics / Plásticos Plastiche | Vc Ø 10 Vf Ø 30 | 35~70 400 300 250 | 35~70 400 300 250 | 35~70 400 300 250 | 35~70 400 300 250 | | | 50~100 450 350 300 | 50~100 450 350 300 | 50~100 450 350 300 | 50~100 450 350 300 |