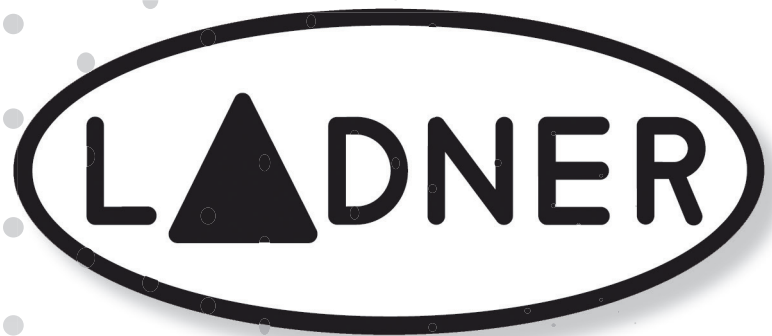


# SUNSTEEL

L'OUTIL COUPANT



## Catalogue MORS - MANDRINS





Catalogue MORS

page : 2

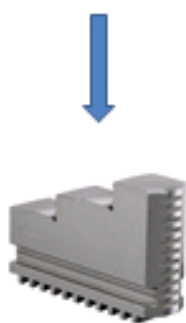
Catalogue MANDRINS

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## LE CHOIX DES MORS

**Mors DURS**  
Tremés Monoblocs



**Mors DOUX**

**Monoblocs**



**Réversibles  
sur semelles**

**A Tenons**

**A stries**



# SOMMAIRE CATALOGUE MORS

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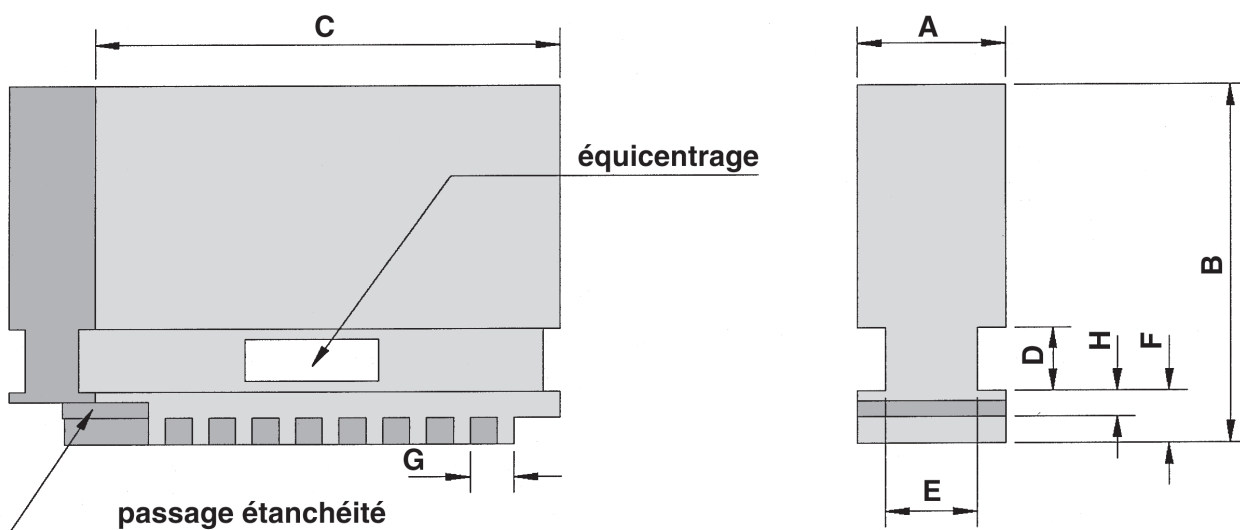
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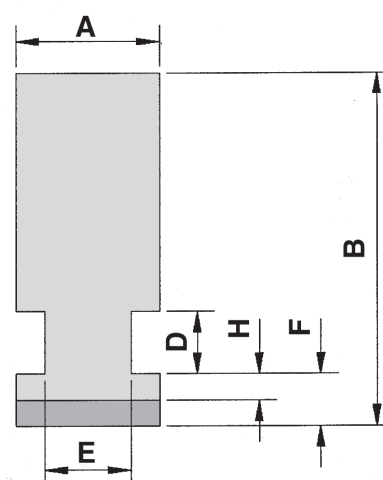
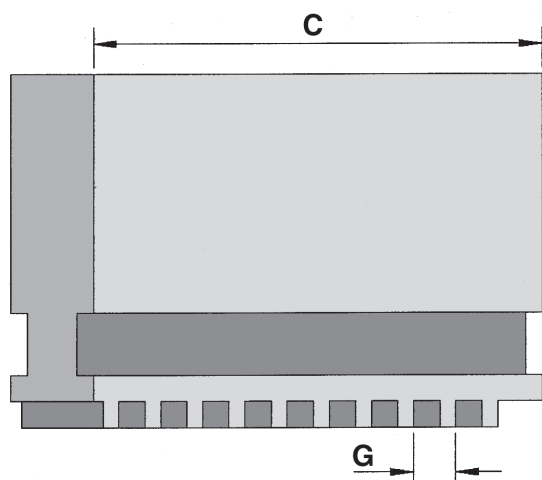
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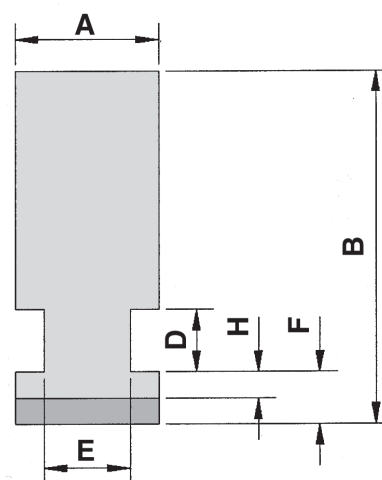
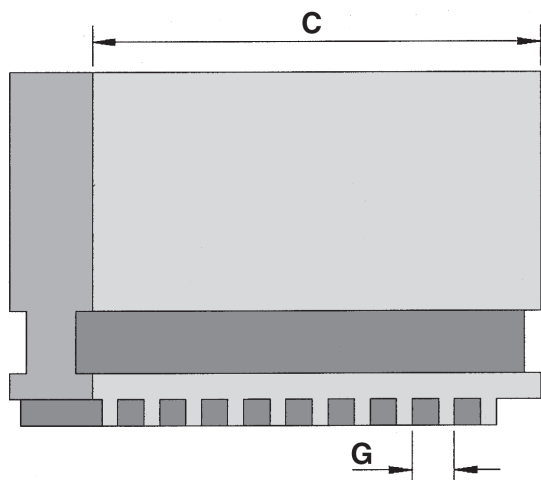
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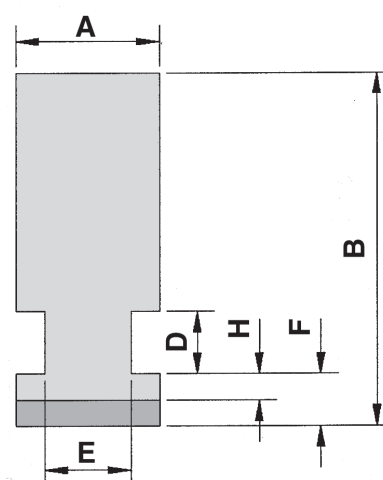
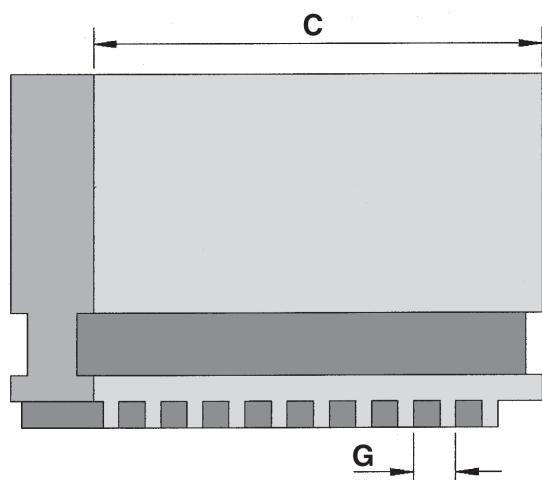
| Ø mandrin | A  | B   | C   | D  | E   | F   | G   | références sur stock |                  | références sur demande |                 |
|-----------|----|-----|-----|----|-----|-----|-----|----------------------|------------------|------------------------|-----------------|
|           |    |     |     |    |     |     |     | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |
| 80        | 12 | 30  | 30  | 5  | 5,8 | 4,5 | 4,5 | 1320070013A00        | 1320070013A15    | 1320070014A00          | 1320070014A40   |
| 100       | 14 | 38  | 41  | 6  | 7,2 | 5,8 | 5,5 | 1320110013A00        | 1320110013A15    | 1320110014A00          | 1320110014A40   |
| 125       | 18 | 43  | 50  | 8  | 10  | 7   | 6,5 | 1320160013A00        | 1320160013A15    | 1320160014A00          | 1320160014A40   |
| 160       | 20 | 48  | 61  | 9  | 12  | 8   | 7   | 1320230013A00        | 1320230013A15    | 1320230014A00          | 1320230014A40   |
| 200-215   | 23 | 58  | 78  | 10 | 14  | 9   | 9   | 1320310013A00        | 1320310013A15    | 1320310014A00          | 1320310014A40   |
| 250       | 25 | 68  | 96  | 12 | 15  | 10  | 9   | 1320410013A00        | 1320410013A15    | 1320410014A00          | 1320410014A40   |
| 300       | 28 | 78  | 108 | 13 | 17  | 10  | 9   | 1320510013A00        | 1320510013A15    | 1320510014A00          | 1320510014A40   |
| 315       | 33 | 78  | 115 | 13 | 19  | 10  | 9   | 1320540013A00        | 1320540013A15    | 1320540014A00          | 1320540014A40   |
| 350-400   | 37 | 88  | 130 | 14 | 21  | 11  | 10  | 1320710013A00        | 1320710013A15    | 1320710014A00          | 1320710014A40   |
| 500       | 48 | 98  | 162 | 15 | 31  | 13  | 12  | 1320730013A00        | 1320730013A15    | 1320730014A00          | 1320730014A40   |
| 630       | 48 | 108 | 203 | 15 | 31  | 15  | 12  | 1320750013A00        | 1320750013A15    | 1320750014A00          | 1320750014A40   |



| Ø mandrin                    | A  | B   | C   | D  | E   | F   | G   | références sur stock |                  | références sur demande |                 |
|------------------------------|----|-----|-----|----|-----|-----|-----|----------------------|------------------|------------------------|-----------------|
|                              |    |     |     |    |     |     |     | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |
| <i>hauteurs spéciales B1</i> |    |     |     |    |     |     |     |                      |                  |                        |                 |
| 100                          | 14 | 58  | 41  | 6  | 7,2 | 5,8 | 5,5 | 1320110013A11        | 1320110013A20    | 1320110014A11          | 1320110014A45   |
| 125                          | 18 | 65  | 50  | 8  | 10  | 7   | 6,5 | 1320160013A11        | 1320160013A20    | 1320160014A11          | 1320160014A45   |
| 160                          | 20 | 78  | 61  | 9  | 12  | 8   | 7   | 1320230013A11        | 1320230013A20    | 1320230014A11          | 1320230014A45   |
| 200-215                      | 23 | 78  | 78  | 10 | 14  | 9   | 9   | 1320310013A11        | 1320310013A20    | 1320310014A11          | 1320310014A45   |
| 250                          | 25 | 98  | 96  | 12 | 15  | 10  | 9   | 1320410013A11        | 1320410013A20    | 1320410014A11          | 1320410014A45   |
| 300                          | 28 | 108 | 108 | 13 | 17  | 10  | 9   | 1320510013A11        | 1320510013A20    | 1320510014A11          | 1320510014A45   |
| 315                          | 33 | 108 | 115 | 13 | 19  | 10  | 9   | 1320540013A11        | 1320540013A20    | 1320540014A11          | 1320540014A45   |
| 350-400                      | 37 | 148 | 130 | 14 | 21  | 11  | 10  | 1320710013A11        | 1320710013A20    | 1320710014A11          | 1320710014A45   |
| 500                          | 48 | 148 | 162 | 15 | 31  | 13  | 12  | 1320730013A11        | 1320730013A20    | 1320730014A11          | 1320730014A45   |
| <i>hauteurs spéciales B2</i> |    |     |     |    |     |     |     |                      |                  |                        |                 |
| 100                          | 14 | 78  | 41  | 6  | 7,2 | 5,8 | 5,5 | 1320110013A12        | 1320110013A25    | 1320110014A12          | 1320110014A50   |
| 125                          | 18 | 78  | 50  | 8  | 10  | 7   | 6,5 | 1320160013A12        | 1320160013A25    | 1320160014A12          | 1320160014A50   |
| 160                          | 20 | 98  | 61  | 9  | 12  | 8   | 7   | 1320230013A12        | 1320230013A25    | 1320230014A12          | 1320230014A50   |
| 200-215                      | 23 | 98  | 78  | 10 | 14  | 9   | 9   | 1320310013A12        | 1320310013A25    | 1320310014A12          | 1320310014A50   |
| 250                          | 25 | 125 | 96  | 12 | 15  | 10  | 9   | 1320410013A12        | 1320410013A25    | 1320410014A12          | 1320410014A50   |
| 300                          | 28 | 135 | 108 | 13 | 17  | 10  | 9   | 1320510013A12        | 1320510013A25    | 1320510014A12          | 1320510014A50   |
| 315                          | 33 | 135 | 115 | 13 | 19  | 10  | 9   | 1320540013A12        | 1320540013A25    | 1320540014A12          | 1320540014A50   |
| 350-400                      | 37 | 178 | 130 | 14 | 21  | 11  | 10  | 1320710013A12        | 1320710013A25    | 1320710014A12          | 1320710014A50   |
| 500                          | 48 | 188 | 162 | 15 | 31  | 13  | 12  | 1320730013A12        | 1320730013A25    | 1320730014A12          | 1320730014A50   |
| <i>hauteurs spéciales B3</i> |    |     |     |    |     |     |     |                      |                  |                        |                 |
| 200-215                      | 23 | 118 | 78  | 10 | 14  | 9   | 9   | 1320310013A13        | 1320310013A30    | 1320310014A13          | 1320310014A55   |
| 250                          | 25 | 148 | 96  | 12 | 15  | 10  | 9   | 1320410013A13        | 1320410013A30    | 1320410014A13          | 1320410014A55   |
| 300                          | 28 | 158 | 108 | 13 | 17  | 10  | 9   | 1320510013A13        | 1320510013A30    | 1320510014A13          | 1320510014A55   |
| 315                          | 33 | 158 | 115 | 13 | 19  | 10  | 9   | 1320540013A13        | 1320540013A30    | 1320540014A13          | 1320540014A55   |
| <i>hauteurs spéciales B4</i> |    |     |     |    |     |     |     |                      |                  |                        |                 |
| 200-215                      | 23 | 148 | 78  | 10 | 14  | 9   | 9   | 1320310013A14        | 1320310013A35    | 1320310014A14          | 1320310014A60   |



| Ø mandrin                     | A  | B  | C   | D  | E   | F   | G   | références sur stock |                  | références sur demande |                 |
|-------------------------------|----|----|-----|----|-----|-----|-----|----------------------|------------------|------------------------|-----------------|
|                               |    |    |     |    |     |     |     | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |
| <i>longueurs spéciales C1</i> |    |    |     |    |     |     |     |                      |                  |                        |                 |
| 100                           | 14 | 38 | 60  | 6  | 7,2 | 5,8 | 5,5 | 1320110013A07        | 1320110013A16    | 1320110014A07          | 1320110014A41   |
| 125                           | 18 | 43 | 70  | 8  | 10  | 7   | 6,5 | 1320160013A07        | 1320160013A16    | 1320160014A07          | 1320160014A41   |
| 160                           | 20 | 48 | 80  | 9  | 12  | 8   | 7   | 1320230013A07        | 1320230013A16    | 1320230014A07          | 1320230014A41   |
| 200-215                       | 23 | 58 | 100 | 10 | 14  | 9   | 9   | 1320310013A07        | 1320310013A16    | 1320310014A07          | 1320310014A41   |
| 250                           | 25 | 68 | 125 | 12 | 15  | 10  | 9   | 1320410013A07        | 1320410013A16    | 1320410014A07          | 1320410014A41   |
| 300                           | 28 | 78 | 150 | 13 | 17  | 10  | 9   | 1320510013A07        | 1320510013A16    | 1320510014A07          | 1320510014A41   |
| 315                           | 33 | 78 | 150 | 13 | 19  | 10  | 9   | 1320540013A07        | 1320540013A16    | 1320540014A07          | 1320540014A41   |
| 350-400                       | 37 | 88 | 175 | 14 | 21  | 11  | 10  | 1320710013A07        | 1320710013A16    | 1320710014A07          | 1320710014A41   |
| 500                           | 48 | 98 | 220 | 15 | 31  | 13  | 12  | 1320730013A07        | 1320730013A16    | 1320730014A07          | 1320730014A41   |
| <i>longueurs spéciales C2</i> |    |    |     |    |     |     |     |                      |                  |                        |                 |
| 160                           | 20 | 48 | 100 | 9  | 12  | 8   | 7   | 1320230013A08        | 1320230013A17    | 1320230014A08          | 1320230014A42   |
| 200-215                       | 23 | 58 | 125 | 10 | 14  | 9   | 9   | 1320310013A08        | 1320310013A17    | 1320310014A08          | 1320310014A42   |
| 250                           | 25 | 68 | 150 | 12 | 15  | 10  | 9   | 1320410013A08        | 1320410013A17    | 1320410014A08          | 1320410014A42   |
| 300                           | 28 | 78 | 180 | 13 | 17  | 10  | 9   | 1320510013A08        | 1320510013A17    | 1320510014A08          | 1320510014A42   |
| 315                           | 33 | 78 | 180 | 13 | 19  | 10  | 9   | 1320540013A08        | 1320540013A17    | 1320540014A08          | 1320540014A42   |
| 350-400                       | 37 | 88 | 220 | 14 | 21  | 11  | 10  | 1320710013A08        | 1320710013A17    | 1320710014A08          | 1320710014A42   |
| 500                           | 48 | 98 | 260 | 15 | 31  | 13  | 12  | 1320730013A08        | 1320730013A17    | 1320730014A08          | 1320730014A42   |
| <i>longueurs spéciales C3</i> |    |    |     |    |     |     |     |                      |                  |                        |                 |
| 200-215                       | 23 | 58 | 150 | 10 | 14  | 9   | 9   | 1320310013A09        | 1320310013A18    | 1320310014A09          | 1320310014A43   |
| 250                           | 25 | 68 | 175 | 12 | 15  | 10  | 9   | 1320410013A09        | 1320410013A18    | 1320410014A09          | 1320410014A43   |
| 300                           | 28 | 78 | 220 | 13 | 17  | 10  | 9   | 1320510013A09        | 1320510013A18    | 1320510014A09          | 1320510014A43   |
| 315                           | 33 | 78 | 220 | 13 | 19  | 10  | 9   | 1320540013A09        | 1320540013A18    | 1320540014A09          | 1320540014A43   |
| 350-400                       | 37 | 88 | 260 | 14 | 21  | 11  | 10  | 1320710013A09        | 1320710013A18    | 1320710014A09          | 1320710014A43   |
| 500                           | 48 | 98 | 300 | 15 | 31  | 13  | 12  | 1320730013A09        | 1320730013A18    | 1320730014A09          | 1320730014A43   |
| <i>longueurs spéciales C4</i> |    |    |     |    |     |     |     |                      |                  |                        |                 |
| 200-215                       | 23 | 58 | 170 | 10 | 14  | 9   | 9   | 1320310013A10        | 1320310013A19    | 1320310014A10          | 1320310014A44   |
| 315                           | 33 | 78 | 260 | 13 | 19  | 10  | 9   | 1320540013A10        | 1320540013A19    | 1320540014A10          | 1320540014A44   |
| 350-400                       | 37 | 88 | 300 | 14 | 21  | 11  | 10  | 1320710013A10        | 1320710013A19    | 1320710014A10          | 1320710014A44   |
| 500                           | 48 | 98 | 350 | 15 | 31  | 13  | 12  | 1320730013A10        | 1320730013A19    | 1320730014A10          | 1320730014A44   |



| Ø mandrin | A | B | C | D | E | F | G | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

**pour mandrins A.C.M.**

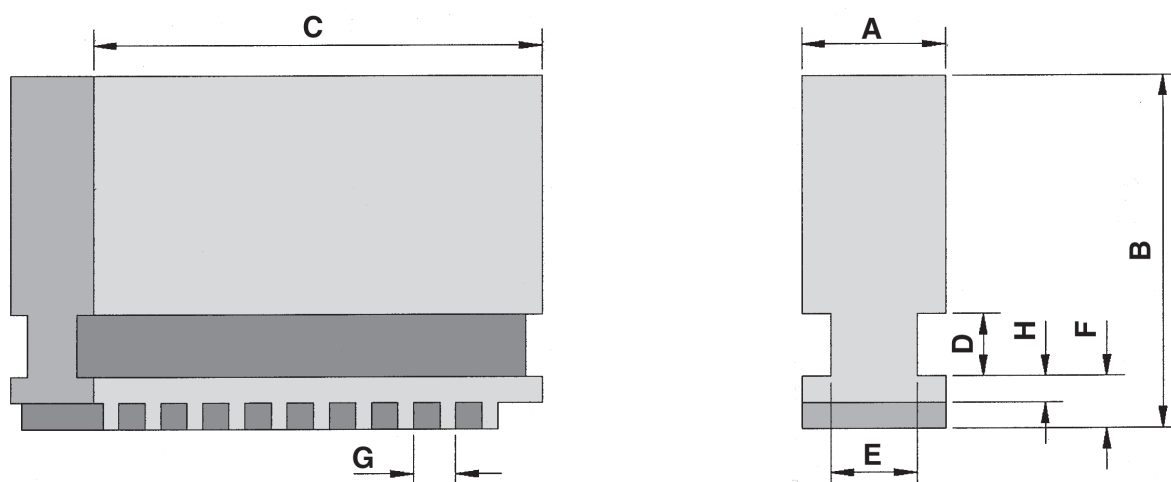
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|-----|----|----|-----|------|------|------|----|---------------|---------------|---------------|---------------|
| 110 | 18 | 43 | 44  | 6,2  | 8,8  | 6,4  | 6  | 1301130013A00 | 1301130013A15 | 1301130014A00 | 1301130014A40 |
| 160 | 20 | 48 | 61  | 8,2  | 11   | 8    | 6  | 1301230013A00 | 1301230013A15 | 1301230014A00 | 1301230014A40 |
| 180 | 24 | 53 | 68  | 8,2  | 13   | 8    | 6  | 1301270013A00 | 1301270013A15 | 1301270014A00 | 1301270014A40 |
| 210 | 29 | 68 | 85  | 10,2 | 17   | 9,5  | 8  | 1301330013A00 | 1301330013A15 | 1301330014A00 | 1301330014A40 |
| 260 | 34 | 78 | 101 | 10,2 | 17   | 11,5 | 8  | 1301430013A00 | 1301430013A15 | 1301430014A00 | 1301430014A40 |
| 300 | 34 | 78 | 108 | 13,2 | 17   | 12,7 | 10 | 1301510013A00 | 1301510013A15 | 1301510014A00 | 1301510014A40 |
| 380 | 38 | 88 | 135 | 13,3 | 20   | 15,8 | 10 | 1301670013A00 | 1301670013A15 | 1301670014A00 | 1301670014A40 |
| 480 | 46 | 98 | 162 | 14,3 | 24,5 | 15,6 | 10 | 1301720013A00 | 1301720013A15 | 1301720014A00 | 1301720014A40 |
| 600 | 46 | 98 | 162 | 14,3 | 24,5 | 15,6 | 10 | 1301750013A00 | 1301750013A15 | 1301750014A00 | 1301750014A40 |

**pour mandrins AMESTRA**

|           |    |    |     |     |    |       |    |               |               |               |               |
|-----------|----|----|-----|-----|----|-------|----|---------------|---------------|---------------|---------------|
| 160       | 23 | 58 | 65  | 8,5 | 15 | 8,1   | 7  | 1302230013A00 | 1302230013A15 | 1302230014A00 | 1302230014A40 |
| 200-215   | 28 | 58 | 78  | 10  | 16 | 9     | 8  | 1302310013A00 | 1302310013A15 | 1302310014A00 | 1302310014A40 |
| 250       | 33 | 68 | 96  | 12  | 19 | 10    | 8  | 1302410013A00 | 1302410013A15 | 1302410014A00 | 1302410014A40 |
| 250       | 33 | 68 | 96  | 12  | 19 | 10    | 10 | 1302410113A00 | 1302410113A15 | 1302410114A00 | 1302410114A40 |
| 300-315   | 38 | 78 | 108 | 12  | 21 | 11    | 10 | 1302510013A00 | 1302510013A15 | 1302510014A00 | 1302510014A40 |
| 350 à 400 | 38 | 88 | 135 | 12  | 21 | 11    | 10 | 1302610013A00 | 1302610013A15 | 1302610014A00 | 1302610014A40 |
| 500       | 42 | 98 | 161 | 14  | 28 | 13,25 | 12 | 1302730013A00 | 1302730013A15 | 1302730014A00 | 1302730014A40 |
| 600       | 50 | 98 | 161 | 14  | 35 | 13,25 | 12 | 1302750013A00 | 1302750013A15 | 1302750014A00 | 1302750014A40 |

**pour mandrins BANI**

|     |       |    |    |      |      |      |   |               |               |               |               |
|-----|-------|----|----|------|------|------|---|---------------|---------------|---------------|---------------|
| 135 | 15,7  | 48 | 57 | 8,35 | 8    | 6,2  | 6 | 1304180013A00 | 1304180013A15 | 1304180014A00 | 1304180014A40 |
| 165 | 19,65 | 48 | 65 | 9,35 | 9,5  | 7,25 | 7 | 1304240013A00 | 1304240013A15 | 1304240014A00 | 1304240014A40 |
| 215 | 21,6  | 58 | 78 | 10,5 | 10,8 | 8,2  | 8 | 1304340013A00 | 1304340013A15 | 1304340014A00 | 1304340014A40 |



| Ø mandrin | A | B | C | D | E | F | G | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

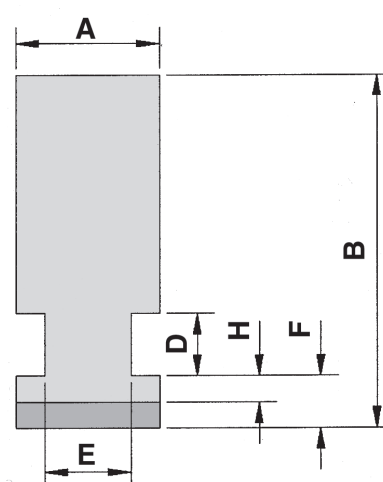
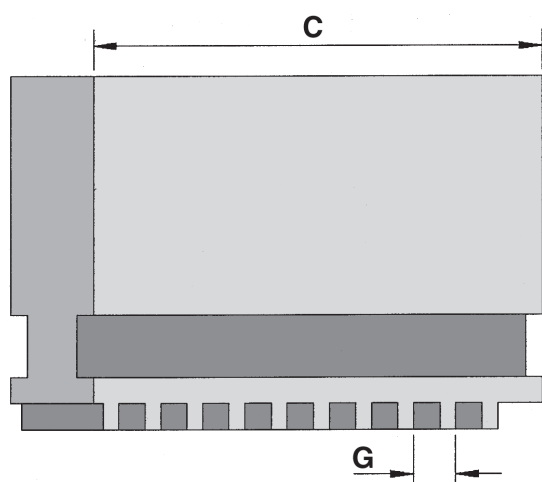
pour mandrins BURNERD nouv. mod.

|     |    |    |     |       |      |       |    |               |               |               |               |
|-----|----|----|-----|-------|------|-------|----|---------------|---------------|---------------|---------------|
| 80  | 10 | 28 | 35  | 5,08  | 3,92 | 5,75  | 6  | 1307070113A00 | 1307070113A15 | 1307070114A00 | 1307070114A40 |
| 100 | 14 | 38 | 42  | 7,10  | 7    | 5,8   | 6  | 1307110213A00 | 1307110213A15 | 1307110214A00 | 1307110214A40 |
| 125 | 16 | 38 | 50  | 7,12  | 8,8  | 5,8   | 6  | 1307160113A00 | 1307160113A15 | 1307160114A00 | 1307160114A40 |
| 160 | 18 | 48 | 61  | 7,12  | 10,2 | 7,2   | 6  | 1307230113A00 | 1307230113A15 | 1307230114A00 | 1307230114A40 |
| 200 | 22 | 58 | 80  | 8,12  | 12,2 | 9,8   | 8  | 1307310113A00 | 1307310113A15 | 1307310114A00 | 1307310114A40 |
| 250 | 25 | 68 | 96  | 8,12  | 15   | 9,8   | 8  | 1307410113A00 | 1307410113A15 | 1307410114A00 | 1307410114A40 |
| 315 | 32 | 78 | 115 | 12,12 | 16   | 11,85 | 10 | 1307540113A00 | 1307540113A15 | 1307540114A00 | 1307540114A40 |

pour mandrins BURNERD anc. mod.

|            |       |    |     |       |       |       |       |               |               |               |               |
|------------|-------|----|-----|-------|-------|-------|-------|---------------|---------------|---------------|---------------|
| 70         | 9,26  | 30 | 32  | 4,84  | 5,25  | 4,53  | 4,23  | 1307050013A00 | 1307050013A15 | 1307050014A00 | 1307050014A40 |
| 76-levier  | 9,38  | 30 | 32  | 3,22  | 4,70  | 4,50  | 4,23  | 1307060013A00 | 1307060013A15 | 1307060014A00 | 1307060014A40 |
| 80 - 82    | 9,39  | 30 | 32  | 4,84  | 5,25  | 4,53  | 4,23  | 1307070013A00 | 1307070013A15 | 1307070014A00 | 1307070014A40 |
| 100 - 102  | 14,10 | 38 | 42  | 4,84  | 8,38  | 4,95  | 5,08  | 1307110013A00 | 1307110013A15 | 1307110014A00 | 1307110014A40 |
| 102-levier | 14,10 | 38 | 42  | 4,84  | 8,38  | 4,95  | 4,23  | 1307110113A00 | 1307110113A15 | 1307110114A00 | 1307110114A40 |
| 125 - 127  | 15,74 | 43 | 50  | 8,03  | 10,18 | 6,88  | 6,35  | 1307160013A00 | 1307160013A15 | 1307160014A00 | 1307160014A40 |
| 152 - 160  | 18,80 | 48 | 61  | 8,03  | 11,60 | 6,88  | 6,35  | 1307230013A00 | 1307230013A15 | 1307230014A00 | 1307230014A40 |
| 200        | 20,62 | 58 | 80  | 9,54  | 11    | 8,70  | 8,46  | 1307310013A00 | 1307310013A15 | 1307310014A00 | 1307310014A40 |
| 190 - 210  | 25,01 | 58 | 80  | 9,68  | 14,60 | 8,58  | 8,46  | 1307290013A00 | 1307290013A15 | 1307290014A00 | 1307290014A40 |
| 230        | 25,01 | 68 | 90  | 9,68  | 14,60 | 8,58  | 8,46  | 1307370013A00 | 1307370013A15 | 1307370014A00 | 1307370014A40 |
| 250        | 25,40 | 68 | 98  | 11,12 | 15,80 | 9,50  | 8,46  | 1307410013A00 | 1307410013A15 | 1307410014A00 | 1307410014A40 |
| 270 - 305  | 31,36 | 78 | 105 | 12,88 | 17,78 | 8,28  | 8,46  | 1307450013A00 | 1307450013A15 | 1307450014A00 | 1307450014A40 |
| 315        | 28,19 | 78 | 115 | 12,91 | 16,50 | 9,50  | 8,46  | 1307540013A00 | 1307540013A15 | 1307540014A00 | 1307540014A40 |
| 380        | 30,22 | 78 | 130 | 11,43 | 17,40 | 9,50  | 10,16 | 1307670013A00 | 1307670013A15 | 1307670014A00 | 1307670014A40 |
| 460 à 610  | 38,11 | 98 | 151 | 14,26 | 22    | 12,70 | 12,70 | 1307720013A00 | 1307720013A15 | 1307720014A00 | 1307720014A40 |





| Ø mandrin | A | B | C | D | E | F | G | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

pour mandrins CHINOIS

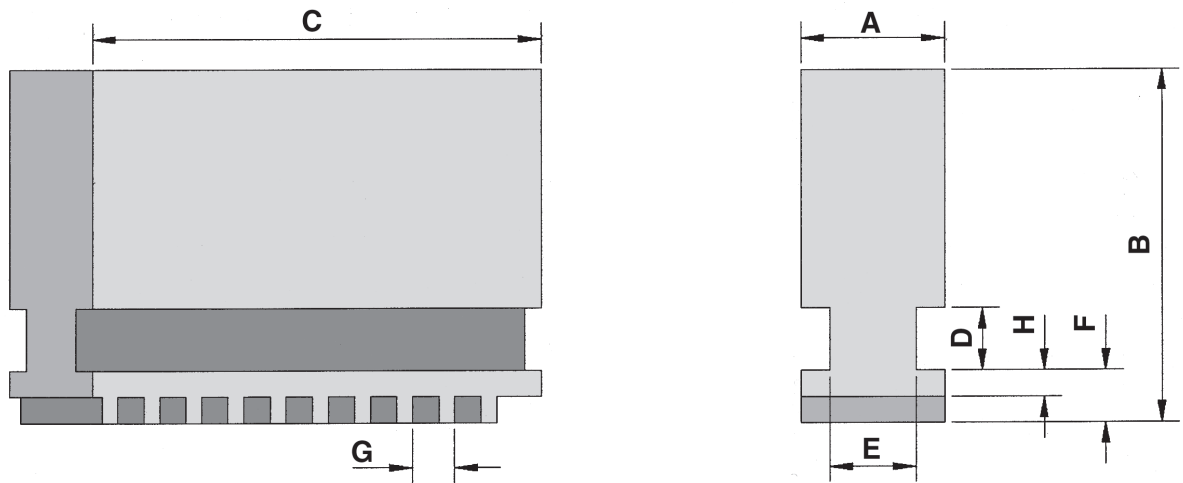
|     |    |    |      |    |      |    |    |               |               |               |               |
|-----|----|----|------|----|------|----|----|---------------|---------------|---------------|---------------|
| 200 | 25 | 68 | 85   | 10 | 15   | 9  | 8  | 1309310013A00 | 1309310013A15 | 1309310014A00 | 1309310014A40 |
| 250 | 27 | 68 | 10,5 | 10 | 16,5 | 12 | 10 | 1309410013A00 | 1309410013A15 | 1309410014A00 | 1309410014A40 |

pour mandrins CURIAL

|            |    |    |     |      |      |      |     |               |               |               |               |
|------------|----|----|-----|------|------|------|-----|---------------|---------------|---------------|---------------|
| 155 / 18   | 18 | 48 | 63  | 8    | 11,5 | 7,5  | 6,5 | 1310220013A00 | 1310220013A15 | 1310220014A00 | 1310220014A40 |
| 155 / 22   | 22 | 58 | 63  | 8    | 11,5 | 7,5  | 6,5 | 1310220113A00 | 1310220113A15 | 1310220114A00 | 1310220114A40 |
| 200 / 22   | 22 | 58 | 78  | 7,98 | 12,5 | 7,5  | 8   | 1310310013A00 | 1310310013A15 | 1310310014A00 | 1310310014A40 |
| 215-250/25 | 25 | 68 | 90  | 9,98 | 15   | 9,5  | 8   | 1310340013A00 | 1310340013A15 | 1310340014A00 | 1310340014A40 |
| 250 / 30   | 30 | 68 | 96  | 12   | 15,5 | 9,5  | 8   | 1310410013A00 | 1310410013A15 | 1310410014A00 | 1310410014A40 |
| 300 / 30   | 30 | 78 | 115 | 12   | 20   | 9,5  | 10  | 1310510013A00 | 1310510013A15 | 1310510014A00 | 1310510014A40 |
| 350-400/35 | 35 | 88 | 125 | 14   | 24   | 11,5 | 12  | 1310610013A00 | 1310610013A15 | 1310610014A00 | 1310610014A40 |
| 380 / 35   | 35 | 88 | 132 | 14   | 20   | 11,5 | 12  | 1310670013A00 | 1310670013A15 | 1310670014A00 | 1310670014A40 |

pour mandrins EMCO

|     |      |    |     |      |    |      |    |               |               |               |               |
|-----|------|----|-----|------|----|------|----|---------------|---------------|---------------|---------------|
| 100 | 12   | 32 | 38  | 6    | 7  | 6    | 6  | 1311110013A00 | 1311110013A15 | 1311110014A00 | 1311110014A40 |
| 110 | 12,2 | 38 | 42  | 5,6  | 7  | 6,4  | 6  | 1311130013A00 | 1311130013A15 | 1311130014A00 | 1311130014A40 |
| 125 | 20   | 48 | 52  | 8    | 11 | 8    | 6  | 1311160013A00 | 1311160013A15 | 1311160014A00 | 1311160014A40 |
| 160 | 19,8 | 48 | 61  | 8,4  | 11 | 7,6  | 8  | 1311230013A00 | 1311230013A15 | 1311230014A00 | 1311230014A40 |
| 200 | 26   | 59 | 78  | 10   | 15 | 10   | 8  | 1311310013A00 | 1311310013A15 | 1311310014A00 | 1311310014A40 |
| 230 | 26   | 68 | 88  | 10   | 15 | 10   | 8  | 1311370013A00 | 1311370013A15 | 1311370014A00 | 1311370014A40 |
| 250 | 25,8 | 68 | 96  | 10,4 | 15 | 9,6  | 10 | 1311410013A00 | 1311410013A15 | 1311410014A00 | 1311410014A40 |
| 315 | 32   | 78 | 115 | 12   | 21 | 12   | 10 | 1311540013A00 | 1311540013A15 | 1311540014A00 | 1311540014A40 |
| 375 | 32   | 88 | 130 | 12   | 21 | 12,5 | 10 | 1311660013A00 | 1311660013A15 | 1311660014A00 | 1311660014A40 |



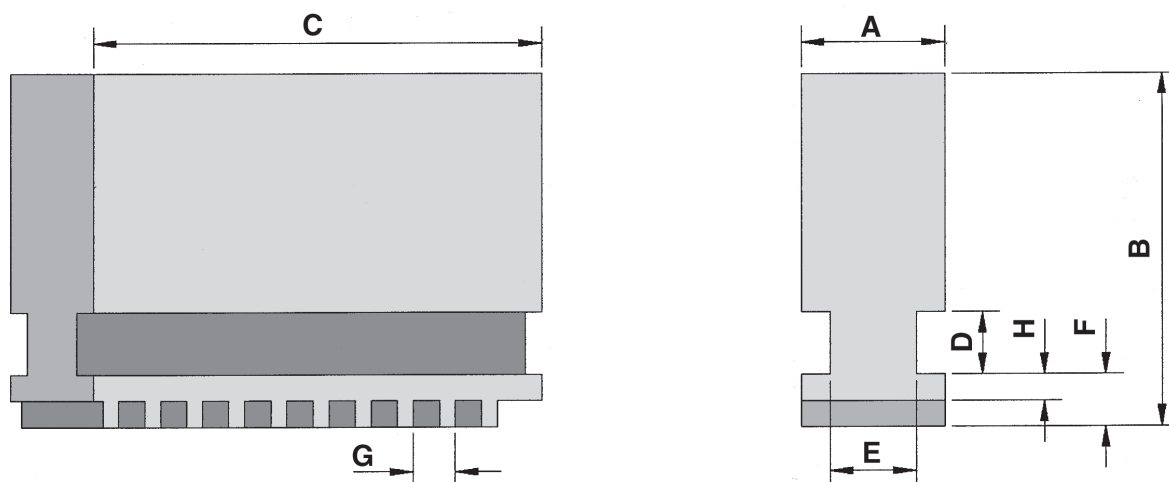
| Ø mandrin | A | B | C | D | E | F | G | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

pour mandrins PUTT-FPA

|     |    |      |     |    |      |    |      |               |               |               |               |
|-----|----|------|-----|----|------|----|------|---------------|---------------|---------------|---------------|
| 80  | 11 | 31,5 | 32  | 6  | 6,3  | 6  | 4    | 1324070113A00 | 1324070113A15 | 1324070114A00 | 1324070114A40 |
| 100 | 16 | 38   | 40  | 6  | 8,3  | 6  | 5    | 1324110013A00 | 1324110013A15 | 1324110014A00 | 1324110014A40 |
| 100 | 15 | 38   | 40  | 6  | 8,3  | 6  | 6    | 1324110113A00 | 1324110113A15 | 1324110114A00 | 1324110114A40 |
| 125 | 20 | 43   | 50  | 8  | 11,3 | 8  | 7    | 1324160213A00 | 1324160213A15 | 1324160214A00 | 1324160214A40 |
| 160 | 20 | 48   | 65  | 8  | 12   | 8  | 7    | 1324230013A00 | 1324230013A15 | 1324230014A00 | 1324230014A40 |
| 160 | 20 | 48   | 65  | 8  | 12   | 8  | 8    | 1324230113A00 | 1324230113A15 | 1324230114A00 | 1324230114A40 |
| 200 | 25 | 58   | 78  | 10 | 14   | 9  | 9    | 1324310013A00 | 1324310013A15 | 1324310014A00 | 1324310014A40 |
| 200 | 25 | 58   | 78  | 10 | 14   | 9  | 8    | 1324310113A00 | 1324310113A15 | 1324310114A00 | 1324310114A40 |
| 250 | 28 | 68   | 96  | 12 | 17   | 10 | 9    | 1324410213A00 | 1324410213A15 | 1324410214A00 | 1324410214A40 |
| 315 | 32 | 78   | 115 | 12 | 19   | 13 | 11   | 1324540013A00 | 1324540013A15 | 1324540014A00 | 1324540014A40 |
| 315 | 32 | 78   | 115 | 12 | 19   | 13 | 10   | 1324540113A00 | 1324540113A15 | 1324540114A00 | 1324540114A40 |
| 400 | 36 | 88   | 136 | 14 | 22   | 15 | 14,2 | 1324710013A00 | 1324710013A15 | 1324710014A00 | 1324710014A40 |
| 400 | 36 | 88   | 136 | 14 | 22   | 15 | 12   | 1324710113A00 | 1324710113A15 | 1324710114A00 | 1324710114A40 |
| 500 | 40 | 98   | 180 | 14 | 23   | 16 | 14,2 | 1324730013A00 | 1324730013A15 | 1324730014A00 | 1324730014A40 |
| 630 | 50 | 108  | 225 | 14 | 32   | 16 | 14,2 | 1324750013A00 | 1324750013A15 | 1324750014A00 | 1324750014A40 |

pour mandrins RÖHM

|             |    |    |     |     |      |      |     |               |               |               |               |
|-------------|----|----|-----|-----|------|------|-----|---------------|---------------|---------------|---------------|
| 74          | 10 | 25 | 33  | 4   | 5    | 4,7  | 4,5 | 1328050013A00 | 1328050013A15 | 1328050014A00 | 1328050014A40 |
| 80          | 12 | 30 | 37  | 4,5 | 5    | 4,7  | 4,5 | 1328070013A00 | 1328070013A15 | 1328070014A00 | 1328070014A40 |
| 100-110     | 14 | 38 | 48  | 6   | 7,5  | 6    | 6   | 1328110013A00 | 1328110013A15 | 1328110014A00 | 1328110014A40 |
| 125         | 18 | 43 | 50  | 7   | 10,4 | 7    | 6   | 1328160013A00 | 1328160013A15 | 1328160014A00 | 1328160014A40 |
| 140         | 18 | 48 | 61  | 7   | 10,2 | 8    | 8   | 1328190013A00 | 1328190013A15 | 1328190014A00 | 1328190014A40 |
| 160         | 18 | 48 | 61  | 7   | 10,2 | 8    | 8   | 1328230013A00 | 1328230013A15 | 1328230014A00 | 1328230014A40 |
| 200         | 20 | 58 | 78  | 8   | 11,1 | 8    | 8   | 1328310013A00 | 1328310013A15 | 1328310014A00 | 1328310014A40 |
| 250         | 24 | 68 | 96  | 10  | 15   | 10   | 10  | 1328410013A00 | 1328410013A15 | 1328410014A00 | 1328410014A40 |
| 315-350-400 | 34 | 78 | 130 | 15  | 21   | 11   | 10  | 1328540013A00 | 1328540013A15 | 1328540014A00 | 1328540014A40 |
| 500-630     | 42 | 98 | 190 | 15  | 28   | 14,6 | 10  | 1328730013A00 | 1328730013A15 | 1328730014A00 | 1328730014A40 |



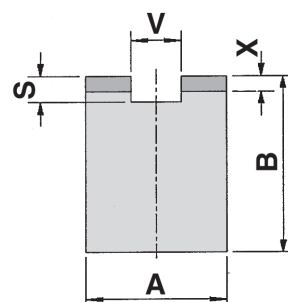
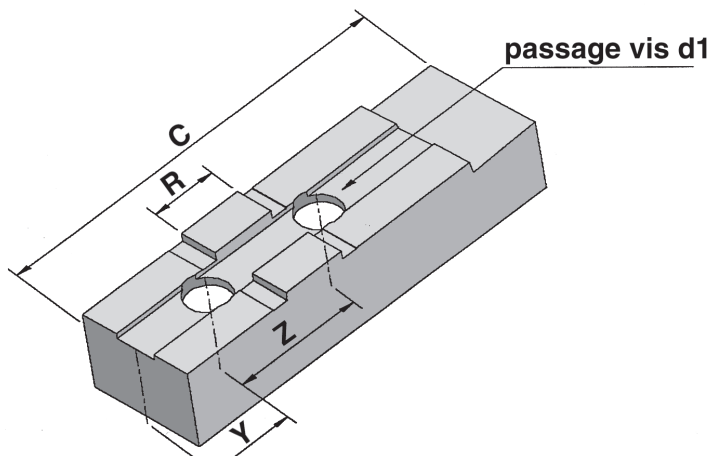
| Ø mandrin | A | B | C | D | E | F | G | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

pour mandrins VACHETTE

|     |    |    |     |      |      |      |     |               |               |               |               |
|-----|----|----|-----|------|------|------|-----|---------------|---------------|---------------|---------------|
| 100 | 13 | 38 | 41  | 6,4  | 7    | 6    | 6   | 1333110113A00 | 1333110113A15 | 1333110114A00 | 1333110114A40 |
| 100 | 13 | 38 | 41  | 6,4  | 6,3  | 5,7  | 5   | 1333110013A00 | 1333110013A15 | 1333110014A00 | 1333110014A40 |
| 125 | 15 | 43 | 50  | 7,4  | 7,8  | 6    | 6,5 | 1333160013A00 | 1333160013A15 | 1333160014A00 | 1333160014A40 |
| 155 | 17 | 48 | 61  | 8,4  | 9,5  | 7,1  | 7   | 1333220013A00 | 1333220013A15 | 1333220014A00 | 1333220014A40 |
| 180 | 19 | 53 | 68  | 9,4  | 10   | 8    | 8   | 1333270013A00 | 1333270013A15 | 1333270014A00 | 1333270014A40 |
| 200 | 21 | 58 | 78  | 9,4  | 11,2 | 8    | 8   | 1333310013A00 | 1333310013A15 | 1333310014A00 | 1333310014A40 |
| 215 | 24 | 58 | 78  | 9,4  | 14   | 8    | 8   | 1333340013A00 | 1333340013A15 | 1333340014A00 | 1333340014A40 |
| 250 | 24 | 68 | 96  | 12,4 | 14,2 | 8,6  | 9   | 1333410013A00 | 1333410013A15 | 1333410014A00 | 1333410014A40 |
| 250 | 28 | 68 | 96  | 12,4 | 17   | 8,5  | 9   | 1333410113A00 | 1333410113A15 | 1333410114A00 | 1333410114A40 |
| 300 | 28 | 78 | 108 | 12,4 | 17,5 | 9,5  | 10  | 1333510013A00 | 1333510013A15 | 1333510014A00 | 1333510014A40 |
| 300 | 32 | 78 | 108 | 12,4 | 19   | 9,5  | 10  | 1331510113A00 | 1331510113A15 | 1331510114A00 | 1331510114A40 |
| 350 | 32 | 78 | 125 | 12,4 | 19   | 10,5 | 12  | 1333610013A00 | 1333610013A15 | 1333610014A00 | 1333610014A40 |
| 400 | 36 | 88 | 130 | 12,4 | 21,8 | 11   | 12  | 1333710013A00 | 1333710013A15 | 1333710014A00 | 1333710014A40 |

pour mandrins T. de G.

|     |    |     |     |       |      |      |    |               |               |               |               |
|-----|----|-----|-----|-------|------|------|----|---------------|---------------|---------------|---------------|
| 85  | 12 | 30  | 30  | 5     |      | 4,7  |    | 1331080013A00 | 1331080013A15 | 1331080014A00 | 1331080014A40 |
| 110 | 15 | 38  | 41  | 6,50  | 7,5  | 5,5  | 5  | 1331130013A00 | 1331130013A15 | 1331130014A00 | 1331130014A40 |
| 135 | 18 | 43  | 50  | 8     | 8,5  | 7,5  | 6  | 1331180013A00 | 1331180013A15 | 1331180014A00 | 1331180014A40 |
| 160 | 22 | 48  | 66  | 9     | 11,5 | 8,5  | 7  | 1331230013A00 | 1331230013A15 | 1331230014A00 | 1331230014A40 |
| 200 | 25 | 58  | 77  | 10,5  | 13   | 9,7  | 8  | 1331310013A00 | 1331310013A15 | 1331310014A00 | 1331310014A40 |
| 250 | 32 | 68  | 95  | 12,48 | 16,5 | 12,5 | 10 | 1331410013A00 | 1331410013A15 | 1331410014A00 | 1331410014A40 |
| 315 | 40 | 78  | 115 | 14    | 21   | 15   | 12 | 1331540013A00 | 1331540013A15 | 1331540014A00 | 1331540014A40 |
| 350 | 40 | 88  | 140 | 14    |      | 15   |    | 1331610013A00 | 1331610013A15 | 1331610014A00 | 1331610014A40 |
| 400 | 40 | 88  | 140 | 14    |      | 15   |    | 1331710013A00 | 1331710013A15 | 1331710014A00 | 1331710014A40 |
| 500 | 45 | 98  | 170 | 16    |      | 18   |    | 1331730013A00 | 1331730013A15 | 1331730014A00 | 1331730014A40 |
| 600 | 50 | 108 | 160 | 14    | 20   | 13   |    | 1331750013A00 | 1331750013A15 | 1331750014A00 | 1331750014A40 |



| Ø mandrin | A | B | C | R | S | V | X | Y | Z | d1 | réf. sur stock |  |
|-----------|---|---|---|---|---|---|---|---|---|----|----------------|--|
|           |   |   |   |   |   |   |   |   |   |    | 2 mors         |  |

ISO épais pour mandrins LADNER

|         |    |    |       |       |     |      |   |       |       |    |               |
|---------|----|----|-------|-------|-----|------|---|-------|-------|----|---------------|
| 125     | 35 | 35 | 65    | 12,68 | 7   | 7,94 | 3 | 14    | 32    | 9  | 1440160042C00 |
| 160     | 40 | 40 | 76    | 12,68 | 7,6 | 7,94 | 3 | 14    | 38    | 11 | 1440230042C00 |
| 200     | 50 | 48 | 92,5  | 12,68 | 7,6 | 7,94 | 3 | 20,28 | 44,45 | 11 | 1440310042C00 |
| 250     | 60 | 58 | 112,5 | 19,03 | 7   | 12,7 | 3 | 26,5  | 54    | 13 | 1440410042E00 |
| 315     | 60 | 58 | 122,5 | 19,03 | 7   | 12,7 | 3 | 27,25 | 63,5  | 13 | 1440540042E00 |
| 350-400 | 68 | 68 | 140   | 19,03 | 10  | 12,7 | 6 | 25,9  | 76,2  | 17 | 1440710042E00 |
| 500-630 | 78 | 78 | 160   | 19,03 | 10  | 12,7 | 6 | 36,9  | 76,2  | 21 | 1440730042E00 |

| Ø mandrin | A | B | C | R | S | V | X | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

ISO pour mandrins LADNER & BURNERD

|             |    |    |       |       |     |      |     |       |       |     |               |               |               |               |
|-------------|----|----|-------|-------|-----|------|-----|-------|-------|-----|---------------|---------------|---------------|---------------|
| 100         | 18 | 28 | 55    | 9,5   | 6   | 7,94 | 2,5 | 13    | 24    | 6,5 | 1440110043C00 | 1440110043C15 | 1440110044C00 | 1440110044C40 |
| 125         | 19 | 38 | 65    | 12,68 | 7   | 7,94 | 3   | 14    | 32    | 9   | 1440160043C00 | 1440160043C15 | 1440160044C00 | 1440160044C40 |
| 160         | 23 | 38 | 76    | 12,68 | 7,6 | 7,94 | 3   | 14    | 38    | 11  | 1440230043C00 | 1440230043C15 | 1440230044C00 | 1440230044C40 |
| 200-215     | 28 | 48 | 92,5  | 12,68 | 7,6 | 7,94 | 3   | 20,28 | 44,45 | 11  | 1440310043C00 | 1440310043C15 | 1440310044C00 | 1440310044C40 |
| 250         | 34 | 58 | 112,5 | 19,03 | 7   | 12,7 | 3   | 26,5  | 54    | 13  | 1440410043E00 | 1440410043E15 | 1440410044E00 | 1440410044E40 |
| 315         | 34 | 58 | 122,5 | 19,03 | 7   | 12,7 | 3   | 27,25 | 63,5  | 13  | 1440540043E00 | 1440540043E15 | 1440540044E00 | 1440540044E40 |
| 350-380-400 | 38 | 68 | 140   | 19,03 | 10  | 12,7 | 6   | 25,9  | 76,2  | 17  | 1440710043E00 | 1440710043E15 | 1440710044E00 | 1440710044E40 |
| 460-500-630 | 48 | 78 | 160   | 19,03 | 10  | 12,7 | 6   | 36,9  | 76,2  | 21  | 1440730043E00 | 1440730043E15 | 1440730044E00 | 1440730044E40 |

type ISO - pour mandrins EMCO & NIKEN

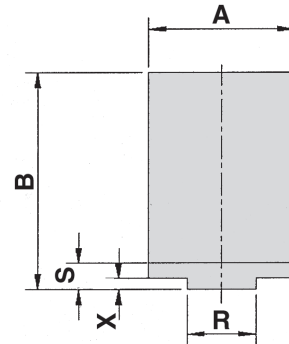
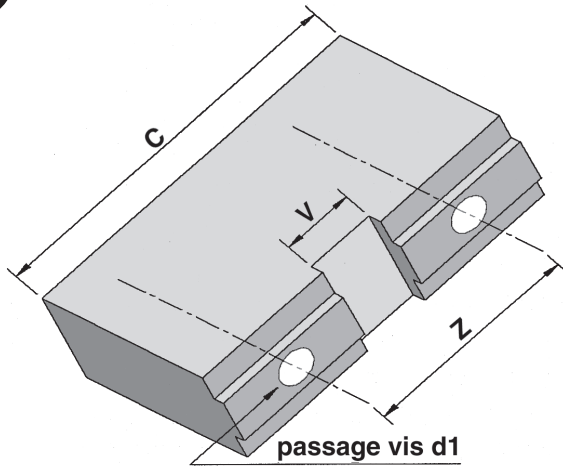
|     |    |    |       |       |     |      |   |       |       |    |                |                |                |                |
|-----|----|----|-------|-------|-----|------|---|-------|-------|----|----------------|----------------|----------------|----------------|
| 160 | 23 | 38 | 76    | 12,68 | 7,6 | 7,94 | 3 | 14    | 38    | 9  | 1428230043C00  | 1428230043C15  | 1428230044C00  | 1428230044C40  |
| 200 | 28 | 48 | 92,5  | 12,68 | 7,6 | 7,94 | 3 | 20,28 | 44,45 | 9  | 1428310043C00  | 1428310043C15  | 1428310044C00  | 1428310044C40  |
| 230 | 28 | 48 | 100   | 16    |     | 12   |   |       | 50    | 11 | 1411370043C00  | 1411370043C15  | 1411370044C00  | 1411370044C40  |
| 250 | 34 | 58 | 112,5 | 19,03 | 7   | 12,7 | 3 | 26,5  | 54    | 13 | 1440410043 E00 | 1440410043 E15 | 1440410044 E00 | 1440410044 E40 |
| 315 | 34 | 58 | 122,5 | 19,03 | 7   | 12,7 | 3 | 27,25 | 63,5  | 13 | 1440540043 E00 | 1440540043 E15 | 1440540044 E00 | 1440540044 E40 |
| 400 | 38 | 68 | 140   | 19,03 | 10  | 12,7 | 6 | 25,9  | 76,2  | 17 | 1440710043 E00 | 1440710043 E15 | 1440710044 E00 | 1440710044 E40 |

type ISO - pour mandrins RÖHM

|         |    |    |       |       |     |      |     |       |       |     |                |                |                |                |
|---------|----|----|-------|-------|-----|------|-----|-------|-------|-----|----------------|----------------|----------------|----------------|
| 100     | 18 | 28 | 55    | 9,5   | 6   | 7,94 | 2,5 | 13    | 24    | 6,5 | 1440110043C00  | 1440110043C15  | 1440110044C00  | 1440110044C40  |
| 125     | 19 | 38 | 65    | 12,68 | 7   | 7,94 | 3   | 14    | 32    | 9   | 1440160043C00  | 1440160043C15  | 1440160044C00  | 1440160044C40  |
| 160     | 23 | 38 | 76    | 12,68 | 7,6 | 7,94 | 3   | 14    | 38    | 9   | 1428230043C00  | 1428230043C15  | 1428230044C00  | 1428230044C40  |
| 200     | 28 | 48 | 92,5  | 12,68 | 7,6 | 7,94 | 3   | 20,28 | 44,45 | 9   | 1428310043C00  | 1428310043C15  | 1428310044C00  | 1428310044C40  |
| 250     | 34 | 58 | 112,5 | 19,03 | 7   | 12,7 | 3   | 26,5  | 54    | 13  | 1440410043 E00 | 1440410043 E15 | 1440410044 E00 | 1440410044 E40 |
| 315     | 34 | 58 | 122,5 | 19,03 | 7   | 12,7 | 3   | 27,25 | 63,5  | 13  | 1440540043 E00 | 1440540043 E15 | 1440540044 E00 | 1440540044 E40 |
| 400     | 38 | 68 | 140   | 19,03 | 10  | 12,7 | 6   | 25,9  | 76,2  | 17  | 1440710043 E00 | 1440710043 E15 | 1440710044 E00 | 1440710044 E40 |
| 500-630 | 48 | 78 | 160   | 19,03 | 10  | 12,7 | 6   | 36,9  | 76,2  | 21  | 1440730043 E00 | 1440730043 E15 | 1440730044 E00 | 1440730044 E40 |



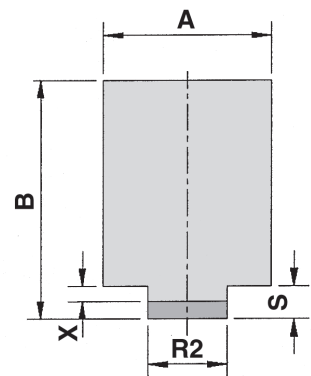
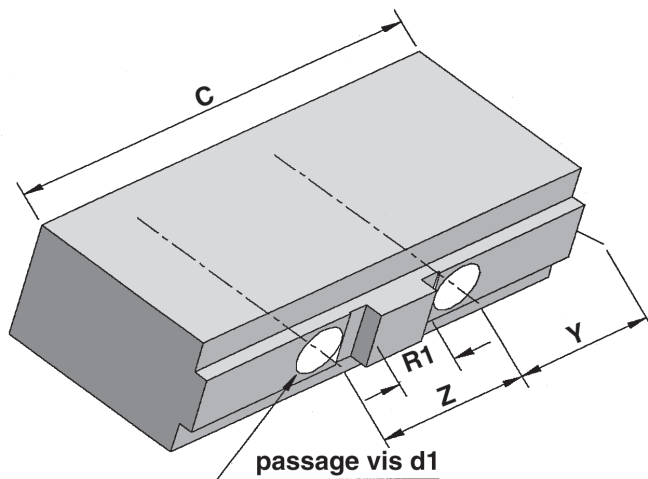
# MORS DOUX RÉVERSIBLES À TENONS



| Ø mandrin | A | B | C | R | S | V | X | Z | d1 | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

**pour mandrins AMESTRA**

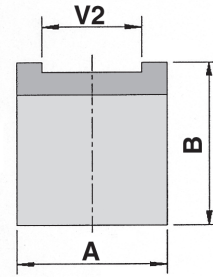
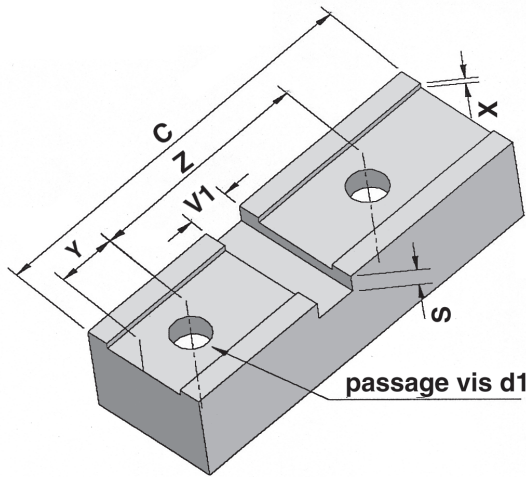
|     |    |    |     |    |     |    |     |     |    |                |                |                |                |
|-----|----|----|-----|----|-----|----|-----|-----|----|----------------|----------------|----------------|----------------|
| 160 | 25 | 40 | 76  | 12 | 6,5 | 10 | 2,5 | 40  | 9  | 1402230063C00  | 1402230063C15  | 1402230064C15  | 1402230064C40  |
| 200 | 28 | 48 | 93  | 14 | 7   | 16 | 3   | 50  | 9  | 1402310063C00  | 1402310063C15  | 1402310064C15  | 1402310064C40  |
| 250 | 34 | 58 | 103 | 16 | 7   | 20 | 3   | 60  | 11 | 1402410063 E00 | 1402410063 E15 | 1402410064 E00 | 1402410064 E40 |
| 300 | 39 | 58 | 120 | 18 | 8   | 20 | 3,5 | 66  | 13 | 1402510063 E00 | 1402510063 E15 | 1402510064 E00 | 1402510064 E40 |
| 390 | 39 | 68 | 143 | 18 | 8   | 20 | 3,5 | 80  | 15 | 1402690063 E00 | 1402690063 E15 | 1402690064 E00 | 1402690064 E40 |
| 500 | 49 | 78 | 160 | 20 | 11  | 25 | 5   | 105 | 15 | 1402730063 E00 | 1402730063 E15 | 1402730064 E00 | 1402730064 E40 |
| 600 | 49 | 78 | 160 | 25 | 11  | 25 | 5   | 105 | 17 | 1402750063 E00 | 1402750063 E15 | 1402750064 E00 | 1402750064 E40 |



| Ø Mandrins | A | B | C | R1 | R2 | S | X | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|------------|---|---|---|----|----|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|            |   |   |   |    |    |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

**pour mandrins CURIAL**

|         |    |    |     |    |    |     |     |      |    |    |                |                |                |                |
|---------|----|----|-----|----|----|-----|-----|------|----|----|----------------|----------------|----------------|----------------|
| 155/18  | 23 | 38 | 80  | 10 | 10 | 7,5 | 3,5 | 25   | 30 | 9  | 1410220063C00  | 1410220063C15  | 1410220064C00  | 1410220064C40  |
| 155/22  | 23 | 38 | 80  | 12 | 12 | 7,5 | 3,5 | 25   | 30 | 9  | 1410220063C00  | 1410220063C15  | 1410220064C00  | 1410220064C40  |
| 200     | 28 | 48 | 90  | 12 | 12 | 7,5 | 3,5 | 27,5 | 35 | 11 | 1410310063C00  | 1410310063C15  | 1410310064C00  | 1410310064C40  |
| 215     | 28 | 48 | 100 | 16 | 16 | 7,5 | 3,5 | 30   | 40 | 13 | 1410340063C00  | 1410340063C15  | 1410340064C00  | 1410340064C40  |
| 250-300 | 34 | 58 | 110 | 16 | 16 | 7,5 | 3,5 | 35   | 40 | 13 | 1410410063 E00 | 1410410063 E15 | 1410410064 E00 | 1410410064 E40 |
| 350-400 | 39 | 68 | 140 | 20 | 20 | 9,5 | 4,5 | 40   | 60 | 15 | 1410610063 E00 | 1410610063 E15 | 1410610064 E00 | 1410610064 E40 |
| 500     | 39 | 68 | 160 | 20 | 20 | 9,5 | 4,5 | 40   | 60 | 15 | 1410730063 E00 | 1410730063 E15 | 1410730064 E00 | 1410730064 E40 |



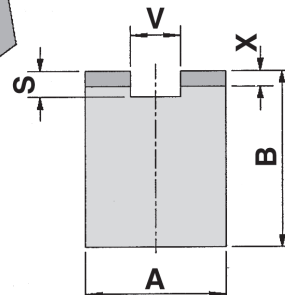
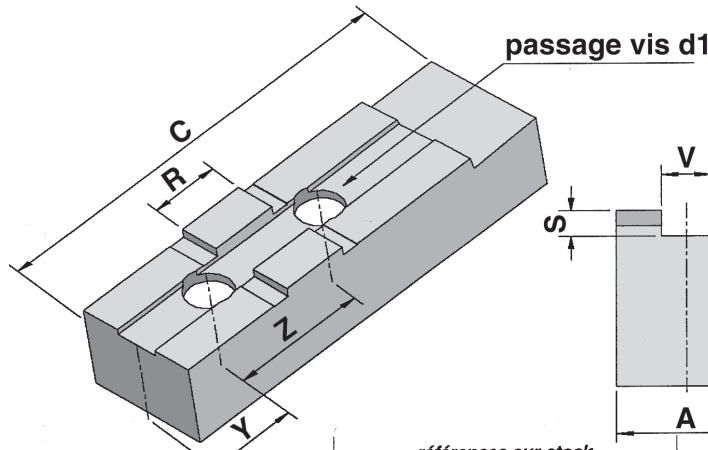
| Ø mandrin | A | B | C | S | V1 | V2 | X | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|----|----|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |    |    |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

**pour mandrins FORKARDT type F**

|            |    |    |    |     |   |    |   |      |    |     |               |               |               |               |
|------------|----|----|----|-----|---|----|---|------|----|-----|---------------|---------------|---------------|---------------|
| 80 type F  | 15 | 24 | 38 | 6,5 | 4 | 9  | 3 | 11   | 16 | 5,3 | 1412070063E00 | 1412070063E15 | 1412070064E00 | 1412070064E40 |
| 100 type F | 18 | 27 | 46 | 6,5 | 5 | 11 | 3 | 13,5 | 19 | 5,3 | 1412110063E00 | 1412110063E15 | 1412110064E00 | 1412110064E40 |
| 125 type F | 20 | 32 | 57 | 6,5 | 5 | 14 | 3 | 18,5 | 20 | 7   | 1412160063E00 | 1412160063E15 | 1412160064E00 | 1412160064E40 |

**pour mandrins VACHETTE**

|         |    |    |       |     |    |    |     |  |    |    |                |                |                |                |
|---------|----|----|-------|-----|----|----|-----|--|----|----|----------------|----------------|----------------|----------------|
| 150     | 25 | 40 | 65    | 3,7 | 9  | 9  | 3,5 |  | 24 | 7  | 1433210063C00  | 1433210063C15  | 1433210064C00  | 1433210064C40  |
| 180-200 | 24 | 43 | 86    | 4,5 | 12 | 12 | 4,3 |  | 32 | 9  | 1433270063C00  | 1433270063C15  | 1433270064C00  | 1433270064C40  |
| 250     | 34 | 58 | 112,5 | 5,2 | 14 | 14 | 5   |  | 48 | 11 | 1433410063 E00 | 1433410063 E15 | 1433410064 E00 | 1433410064 E40 |
| 350-400 | 39 | 68 | 140   | 5,5 | 16 | 16 | 5,3 |  | 60 | 13 | 1433610063 E00 | 1433610063 E15 | 1433610064 E00 | 1433610064 E40 |



| Ø Mandrins | A | B | C | R | S | V | X | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|------------|---|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|            |   |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

**pour mandrins FORKARDT type F**

|                |    |     |     |    |      |    |     |    |    |    |               |               |               |               |
|----------------|----|-----|-----|----|------|----|-----|----|----|----|---------------|---------------|---------------|---------------|
| 160 type F     | 22 | 43  | 85  | 18 | 7,5  | 8  | 4,5 | 18 | 32 | 9  | 1412230063E00 | 1412230063E15 | 1412230064E00 | 1412230064E40 |
| 200 type F     | 24 | 48  | 105 | 20 | 8,5  | 10 | 5   | 24 | 40 | 9  | 1412310063E00 | 1412310063E15 | 1412310064E00 | 1412310064E40 |
| 250 type F     | 34 | 58  | 125 | 20 | 8,5  | 12 | 5   | 26 | 40 | 13 | 1412410063E00 | 1412410063E15 | 1412410064E00 | 1412410064E40 |
| 315 type F     | 39 | 67  | 145 | 26 | 9,5  | 12 | 6   | 31 | 54 | 13 | 1412540063E00 | 1412540063E15 | 1412540064E00 | 1412540064E40 |
| 400-500 type F | 49 | 87  | 180 | 30 | 11,5 | 18 | 7   | 35 | 60 | 17 | 1412710063E00 | 1412710063E15 | 1412710064E00 | 1412710064E40 |
| 630 type F     | 69 | 118 | 260 | 40 | 12,5 | 24 | 8   | 49 | 82 | 21 | 1412750063E00 | 1412750063E15 | 1412750064E00 | 1412750064E40 |

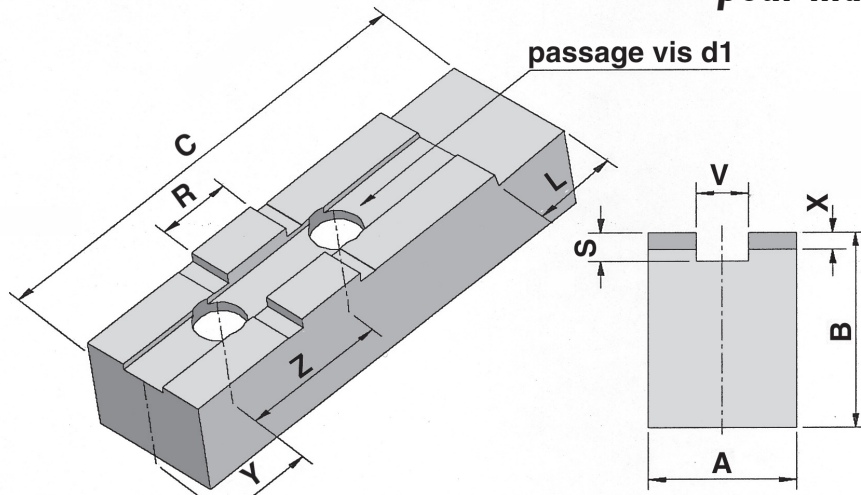
**pour mandrins MAT**

|     |    |    |       |    |   |    |   |       |    |    |                |                |                |                |
|-----|----|----|-------|----|---|----|---|-------|----|----|----------------|----------------|----------------|----------------|
| 150 | 23 | 38 | 70    | 12 | 7 | 10 | 3 | 20    | 30 | 9  | 1422210063C00  | 1422210063C15  | 1422210064C00  | 1422210064C40  |
| 200 | 28 | 48 | 92,5  | 16 | 7 | 12 | 3 | 26,25 | 40 | 11 | 1422310063C00  | 1422310063C15  | 1422310064C00  | 1422310064C40  |
| 250 | 34 | 58 | 112,5 | 18 | 7 | 15 | 3 | 32,25 | 48 | 13 | 1422410063 E00 | 1422410063 E15 | 1422410064 E00 | 1422410064 E40 |



# MORS DOUX RÉVERSIBLES À TENONS

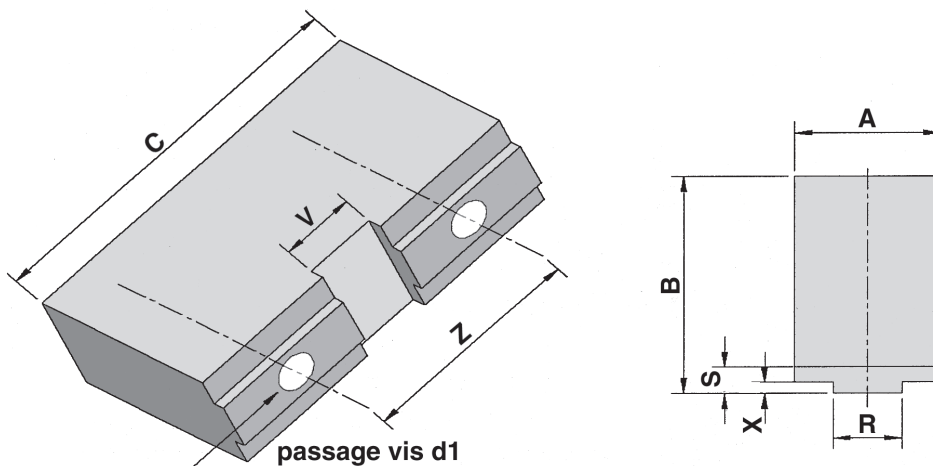
pour mandrins GAMET



| Ø mandrin |   |   |   |   |   |   |   |   |   |   |    | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           | A | B | C | L | R | S | V | X | Y | Z | d1 | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

pour mandrins GAMET type delta DX

| Ø mandrin             |    |    |     |     |    |     |    |     |      |    |    | hauteurs normales |                  |               |                 |
|-----------------------|----|----|-----|-----|----|-----|----|-----|------|----|----|-------------------|------------------|---------------|-----------------|
|                       | A  | B  | C   | L   | R  | S   | V  | X   | Y    | Z  | d1 | 3 mors            | 3 M fraisés 120° | 4 mors        | 4 M fraisés 90° |
| 170                   | 35 | 35 | 80  | 29  | 18 | 7,5 | 8  | 5   | 9,5  | 32 | 9  | 1451250063C00     | 1451250063C15    | 1451250064C00 | 1451250064C40   |
| 210                   | 34 | 44 | 100 | 37  | 20 | 8   | 10 | 5,5 | 11   | 40 | 9  | 1451330063C00     | 1451330063C15    | 1451330064C00 | 1451330064C40   |
| 250-260               | 44 | 50 | 120 | 48  | 20 | 8,5 | 12 | 5,5 | 16,5 | 40 | 13 | 1451410063C00     | 1451410063C15    | 1451410064C00 | 1451410064C40   |
| 320                   | 49 | 56 | 150 | 57  | 26 | 10  | 12 | 7   | 18,5 | 54 | 13 | 1451550063C00     | 1451550063C15    | 1451550064C00 | 1451550064C40   |
| 400                   | 70 | 70 | 180 | 104 | 30 | 12  | 18 | 8   | 27   | 60 | 17 | 1451710063C00     | 1451710063C15    | 1451710064C00 | 1451710064C40   |
| hauteurs spéciales B1 |    |    |     |     |    |     |    |     |      |    |    |                   |                  |               |                 |
| 170                   | 35 | 58 | 80  | 29  | 18 | 7,5 | 8  | 5,0 | 9,5  | 32 | 9  | 1451250063C11     | 1451250063C20    | 1451250064C11 | 1451250064C45   |
| 210                   | 34 | 58 | 100 | 37  | 20 | 8   | 10 | 5,5 | 11   | 40 | 9  | 1451330063C11     | 1451330063C20    | 1451330064C11 | 1451330064C45   |
| 250-260               | 44 | 78 | 120 | 48  | 20 | 8,5 | 12 | 5,5 | 16,5 | 40 | 13 | 1451410063C11     | 1451410063C20    | 1451410064C11 | 1451410064C45   |
| 320                   | 49 | 88 | 150 | 57  | 26 | 10  | 12 | 7   | 18,5 | 54 | 13 | 1451550063C11     | 1451550063C20    | 1451550064C11 | 1451550064C45   |
| hauteurs spéciales B2 |    |    |     |     |    |     |    |     |      |    |    |                   |                  |               |                 |
| 170                   | 35 | 78 | 80  | 29  | 18 | 7,5 | 8  | 5   | 9,5  | 32 | 9  | 1451250063C12     | 1451250063C25    | 1451250064C12 | 1451250064C50   |
| 210                   | 34 | 78 | 100 | 37  | 20 | 8   | 10 | 5,5 | 11   | 40 | 9  | 1451330063C12     | 1451330063C25    | 1451330064C12 | 1451330064C50   |
| 250-260               | 44 | 98 | 120 | 48  | 20 | 8,5 | 12 | 5,5 | 16,5 | 40 | 13 | 1451410063C12     | 1451410063C25    | 1451410064C12 | 1451410064C50   |
| hauteurs spéciales B3 |    |    |     |     |    |     |    |     |      |    |    |                   |                  |               |                 |
| 210                   | 34 | 98 | 100 | 37  | 20 | 8   | 10 | 5,5 | 11   | 40 | 9  | 1451330063C13     | 1451330063C30    | 1451330064C13 | 1451330064C55   |



| Ø Mandrins | A | B | C | R | S | V | X | Y | Z | d1 | 3 mors | 3 M fraisés 120° | 4 mors | 4 M fraisés 90° |
|------------|---|---|---|---|---|---|---|---|---|----|--------|------------------|--------|-----------------|
|------------|---|---|---|---|---|---|---|---|---|----|--------|------------------|--------|-----------------|

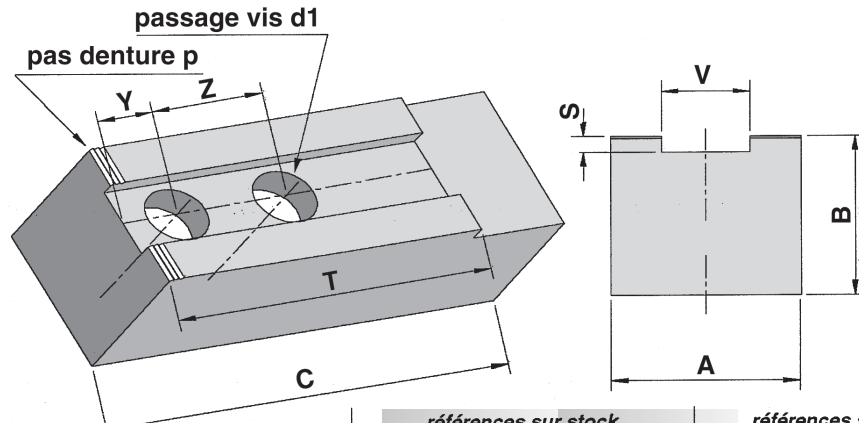
pour mandrins GAMET type GA

|     |    |    |    |    |   |   |     |   |    |   |               |               |               |               |
|-----|----|----|----|----|---|---|-----|---|----|---|---------------|---------------|---------------|---------------|
| 110 | 21 | 26 | 53 | 10 | 6 | 8 | 2,5 | 8 | 18 | 9 | 1445130063C00 | 1445130063C15 | 1445130064C00 | 1445130064C40 |
|-----|----|----|----|----|---|---|-----|---|----|---|---------------|---------------|---------------|---------------|



# MORS DOUX RÉVERSIBLES À STRIES

pour mandrins GAMET



| Ø mandrin | A | B | C | P | S | T | V | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

pour mandrins GAMET - type GA

|     |    |    |    |          |     |    |    |    |    |    |               | hauteurs normales |               |               |  |
|-----|----|----|----|----------|-----|----|----|----|----|----|---------------|-------------------|---------------|---------------|--|
| 110 | 21 | 26 | 53 | 1,5-60°  | 3,5 | 20 | 10 | 8  | 18 | 9  | 1445130053C00 | 1445130053C15     | 1445130054C00 | 1445130054C40 |  |
| 130 | 25 | 25 | 58 | 1/16-90° | 3,5 | 12 | 11 | 8  | 15 | 9  | 1445170053C00 | 1445170053C15     | 1445170054C00 | 1445170054C40 |  |
| 160 | 27 | 34 | 72 | 1/16-90° | 4,5 | 16 | 14 | 10 | 18 | 11 | 1445230053C00 | 1445230053C15     | 1445230054C00 | 1445230054C40 |  |
| 210 | 32 | 32 | 93 | 1/16-90° | 4,5 | 31 | 17 | 11 | 20 | 13 | 1445330053C00 | 1445330053C15     | 1445330054C00 | 1445330054C40 |  |

pour mandrins GAMET - type delta DX : pas des stries 1/16 à 90°

|         |    |    |     |          |     |     |      |    |    |    |               | hauteurs normales |               |               |  |
|---------|----|----|-----|----------|-----|-----|------|----|----|----|---------------|-------------------|---------------|---------------|--|
| 140     | 26 | 28 | 65  | 1/16-90° | 3,5 | 42  | 11   | 12 | 18 | 9  | 1452190053C00 | 1452190053C15     | 1452190054C00 | 1452190054C40 |  |
| 170     | 30 | 35 | 80  | 1/16-90° | 4,5 | 51  | 14   | 15 | 22 | 11 | 1452250053C00 | 1452250053C15     | 1452250054C00 | 1452250054C40 |  |
| 210     | 34 | 44 | 100 | 1/16-90° | 4,5 | 63  | 17   | 18 | 26 | 13 | 1452330053C00 | 1452330053C15     | 1452330054C00 | 1452330054C40 |  |
| 250-260 | 44 | 50 | 120 | 1/16-90° | 4,5 | 72  | 21   | 20 | 32 | 17 | 1452410053C00 | 1452410053C15     | 1452410054C00 | 1452410054C40 |  |
| 320     | 49 | 56 | 150 | 1/16-90° | 4,5 | 93  | 21   | 28 | 38 | 17 | 1452550053C00 | 1452550053C15     | 1452550054C00 | 1452550054C40 |  |
| 400     | 79 | 70 | 180 | 1/16-90° | 5,5 | 114 | 25,5 | 32 | 50 | 21 | 1452710053C00 | 1452710053C15     | 1452710054C00 | 1452710054C40 |  |

|         |    |    |     |          |     |    |    |    |    |    |               | hauteurs spéciales B1 |               |               |  |
|---------|----|----|-----|----------|-----|----|----|----|----|----|---------------|-----------------------|---------------|---------------|--|
| 140     | 26 | 48 | 65  | 1/16-90° | 3,5 | 42 | 11 | 12 | 18 | 9  | 1452190053C11 | 1452190053C20         | 1452190054C11 | 1452190054C45 |  |
| 170     | 30 | 58 | 80  | 1/16-90° | 4,5 | 57 | 14 | 15 | 22 | 11 | 1452250053C11 | 1452250053C20         | 1452250054C11 | 1452250054C45 |  |
| 210     | 34 | 58 | 100 | 1/16-90° | 4,5 | 63 | 17 | 18 | 26 | 13 | 1452330053C11 | 1452330053C20         | 1452330054C11 | 1452330054C45 |  |
| 250-260 | 44 | 78 | 120 | 1/16-90° | 4,5 | 72 | 21 | 20 | 32 | 17 | 1452410053C11 | 1452410053C20         | 1452410054C11 | 1452410054C45 |  |
| 320     | 49 | 88 | 150 | 1/16-90° | 4,5 | 93 | 21 | 28 | 38 | 17 | 1452550053C11 | 1452550053C20         | 1452550054C11 | 1452550054C45 |  |

|         |    |    |     |          |     |    |    |    |    |    |               | hauteurs spéciales B2 |               |               |  |
|---------|----|----|-----|----------|-----|----|----|----|----|----|---------------|-----------------------|---------------|---------------|--|
| 170     | 30 | 78 | 80  | 1/16-90° | 4,5 | 51 | 14 | 15 | 22 | 11 | 1452250053C12 | 1452250053C25         | 1452250054C12 | 1452250054C50 |  |
| 210     | 34 | 78 | 100 | 1/16-90° | 4,5 | 63 | 17 | 18 | 26 | 13 | 1452330053C12 | 1452330053C25         | 1452330054C12 | 1452330054C50 |  |
| 250-260 | 44 | 98 | 120 | 1/16-90° | 4,5 | 72 | 21 | 20 | 32 | 17 | 1452430053C12 | 1452430053C25         | 1452430054C12 | 1452430054C50 |  |

|     |    |    |     |          |     |    |    |    |    |    |               | hauteurs spéciales B3 |               |               |  |
|-----|----|----|-----|----------|-----|----|----|----|----|----|---------------|-----------------------|---------------|---------------|--|
| 210 | 34 | 98 | 100 | 1/16-90° | 4,5 | 63 | 17 | 18 | 26 | 13 | 1452330053C13 | 1452330053C30         | 1452330054C13 | 1452330054C55 |  |

pour mandrins GAMET - type delta DX : pas des stries 1,5 à 60°

|         |    |    |     |         |     |     |      |    |    |    |               | hauteurs normales |               |               |  |
|---------|----|----|-----|---------|-----|-----|------|----|----|----|---------------|-------------------|---------------|---------------|--|
| 140     | 26 | 28 | 65  | 1,5-60° | 3,5 | 42  | 11   | 12 | 18 | 9  | 1451190053C00 | 1451190053C15     | 1451190054C00 | 1451190054C40 |  |
| 170     | 30 | 35 | 80  | 1,5-60° | 4,5 | 51  | 14   | 15 | 22 | 11 | 1451250053C00 | 1451250053C15     | 1451250054C00 | 1451250054C40 |  |
| 210     | 34 | 44 | 100 | 1,5-60° | 4,5 | 63  | 17   | 18 | 26 | 13 | 1451330053C00 | 1451330053C15     | 1451330054C00 | 1451330054C40 |  |
| 250-260 | 44 | 50 | 120 | 1,5-60° | 4,5 | 72  | 21   | 20 | 32 | 17 | 1451410053C00 | 1451410053C15     | 1451410054C00 | 1451410054C40 |  |
| 320     | 49 | 56 | 150 | 1,5-60° | 4,5 | 93  | 21   | 28 | 38 | 17 | 1451550053C00 | 1451550053C15     | 1451550054C00 | 1451550054C40 |  |
| 400     | 79 | 70 | 180 | 1,5-60° | 5,5 | 114 | 25,5 | 32 | 50 | 21 | 1451710053C00 | 1451710053C15     | 1451710054C00 | 1451710054C40 |  |

|         |    |    |     |         |     |    |    |    |    |    |               | hauteurs spéciales B1 |               |               |  |
|---------|----|----|-----|---------|-----|----|----|----|----|----|---------------|-----------------------|---------------|---------------|--|
| 140     | 26 | 48 | 65  | 1,5-60° | 3,5 | 42 | 11 | 12 | 18 | 9  | 1451190053C11 | 1451190053C20         | 1451190054C11 | 1451190054C45 |  |
| 170     | 30 | 58 | 80  | 1,5-60° | 4,5 | 51 | 14 | 15 | 22 | 11 | 1451250053C11 | 1451250053C20         | 1451250054C11 | 1451250054C45 |  |
| 210     | 34 | 58 | 100 | 1,5-60° | 4,5 | 63 | 17 | 18 | 26 | 13 | 1451330053C11 | 1451330053C20         | 1451330054C11 | 1451330054C45 |  |
| 250-260 | 44 | 78 | 120 | 1,5-60° | 4,5 | 72 | 21 | 20 | 32 | 17 | 1451410053C11 | 1451410053C20         | 1451410054C11 | 1451410054C45 |  |
| 320     | 49 | 88 | 150 | 1,5-60° | 4,5 | 93 | 21 | 28 | 38 | 17 | 1451550053C11 | 1451550053C20         | 1451550054C11 | 1451550054C45 |  |

|         |    |    |     |         |     |    |    |    |    |    |               | hauteurs spéciales B2 |               |               |  |
|---------|----|----|-----|---------|-----|----|----|----|----|----|---------------|-----------------------|---------------|---------------|--|
| 170     | 30 | 78 | 80  | 1,5-60° | 4,5 | 51 | 14 | 15 | 22 | 11 | 1451250053C12 | 1451250053C25         | 1451250054C12 | 1451250054C50 |  |
| 210     | 34 | 78 | 100 | 1,5-60° | 4,5 | 63 | 17 | 18 | 26 | 13 | 1451330053C12 | 1451330053C25         | 1451330054C12 | 1451330054C50 |  |
| 250-260 | 44 | 98 | 120 | 1,5-60° | 4,5 | 72 | 21 | 20 | 32 | 17 | 1451430053C12 | 1451430053C25         | 1451430054C12 | 1451430054C50 |  |

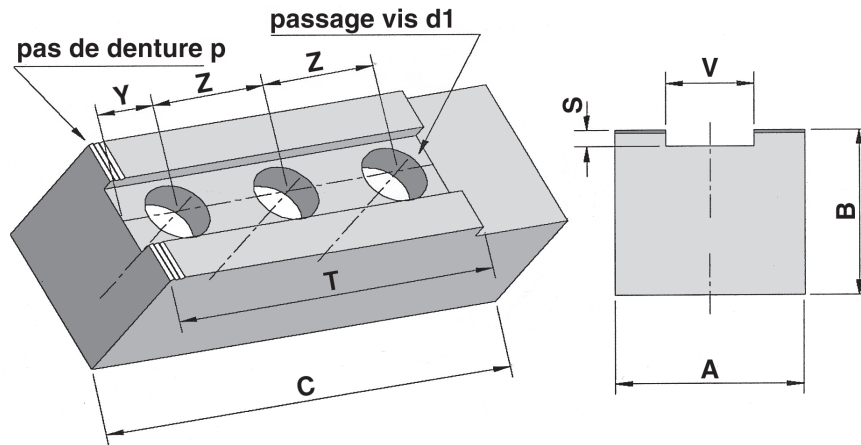
|     |    |    |     |         |     |    |    |    |    |    |               | hauteurs spéciales B3 |               |               |  |
|-----|----|----|-----|---------|-----|----|----|----|----|----|---------------|-----------------------|---------------|---------------|--|
| 210 | 34 | 98 | 100 | 1,5-60° | 4,5 | 63 | 17 | 18 | 26 | 13 | 1451330053C13 | 1451330053C30         | 1451330054C13 | 1451330054C55 |  |





# MORS DOUX RÉVERSIBLES À STRIES

pour mandrins GAMET type MAC



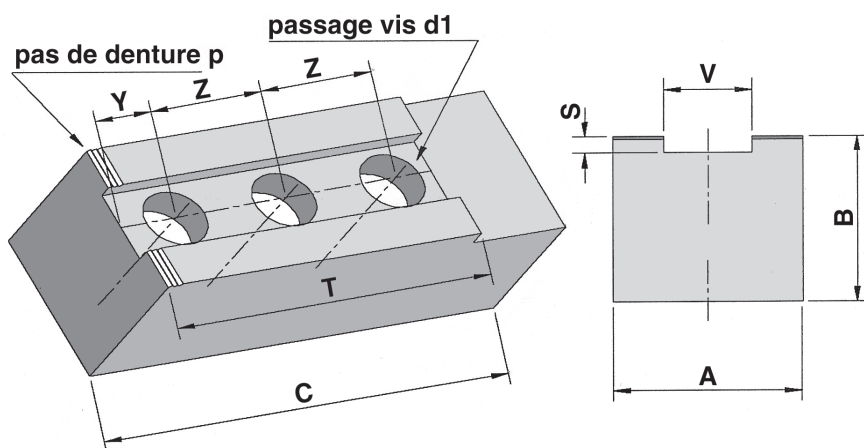
| Ø mandrin | A | B | C | P | S | T | V | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

**pour mandrins GAMET type MAC : pas des stries 1/16 à 90°**

|     |         |    |    |      |          |     |     |      |    |    |    |               | hauteurs normales     |               |               |  |
|-----|---------|----|----|------|----------|-----|-----|------|----|----|----|---------------|-----------------------|---------------|---------------|--|
| 132 | 2 trous | 27 | 27 | 64   | 1/16-90° | 3,5 | 40  | 11   | 10 | 18 | 9  | 1414170053C00 | 1414170053C15         | 1414170054C00 | 1414170054C40 |  |
| 165 | 3 trous | 30 | 30 | 75   | 1/16-90° | 4,5 | 60  | 14   | 10 | 20 | 11 | 1414240053C00 | 1414240053C15         | 1414240054C00 | 1414240054C40 |  |
| 200 | 3 trous | 35 | 35 | 95   | 1/16-90° | 4,5 | 73  | 17   | 13 | 25 | 13 | 1414310053C00 | 1414310053C15         | 1414310054C00 | 1414310054C40 |  |
| 250 | 3 trous | 45 | 45 | 119  | 1/16-90° | 4,5 | 92  | 21   | 16 | 32 | 17 | 1414410053C00 | 1414410053C15         | 1414410054C00 | 1414410054C40 |  |
| 315 | 3 trous | 45 | 45 | 150  | 1/16-90° | 4,5 | 106 | 21   | 16 | 38 | 17 | 1414540053C00 | 1414540053C15         | 1414540054C00 | 1414540054C40 |  |
| 380 | 3 trous | 60 | 60 | 182  | 1/16-90° | 4,5 | 126 | 25,5 | 25 | 42 | 21 | 1414670053C00 | 1414670053C15         | 1414670054C00 | 1414670054C40 |  |
|     |         |    |    |      |          |     |     |      |    |    |    |               | hauteurs spéciales B1 |               |               |  |
| 132 | 2 trous | 27 | 48 | 63,5 | 1/16-90° | 3,5 | 40  | 11   | 10 | 18 | 9  | 1414170053C11 | 1414170053C20         | 1414170054C11 | 1414170054C45 |  |
| 165 | 3 trous | 30 | 58 | 75   | 1/16-90° | 4,5 | 60  | 14   | 10 | 20 | 11 | 1414240053C11 | 1414240053C20         | 1414240054C11 | 1414240054C45 |  |
| 200 | 3 trous | 34 | 58 | 95   | 1/16-90° | 4,5 | 73  | 17   | 13 | 25 | 13 | 1414310053C11 | 1414310053C20         | 1414310054C11 | 1414310054C45 |  |
| 250 | 3 trous | 45 | 78 | 119  | 1/16-90° | 4,5 | 92  | 21   | 16 | 32 | 17 | 1414410053C11 | 1414410053C20         | 1414410054C11 | 1414410054C45 |  |
| 315 | 3 trous | 45 | 98 | 150  | 1/16-90° | 4,5 | 106 | 21   | 16 | 38 | 17 | 1414540053C11 | 1414540053C20         | 1414540054C11 | 1414540054C45 |  |
|     |         |    |    |      |          |     |     |      |    |    |    |               | hauteurs spéciales B2 |               |               |  |
| 165 | 3 trous | 30 | 78 | 75   | 1/16-90° | 4,5 | 60  | 14   | 10 | 20 | 11 | 1414240053C12 | 1414240053C25         | 1414240054C12 | 1414240054C50 |  |
| 200 | 3 trous | 35 | 78 | 95   | 1/16-90° | 4,5 | 73  | 17   | 13 | 25 | 13 | 1414310053C12 | 1414310053C25         | 1414310054C12 | 1414310054C50 |  |
| 250 | 3 trous | 45 | 98 | 119  | 1/16-90° | 4,5 | 92  | 21   | 16 | 32 | 17 | 1414410053C12 | 1414410053C25         | 1414410054C12 | 1414410054C50 |  |
|     |         |    |    |      |          |     |     |      |    |    |    |               | hauteurs spéciales B3 |               |               |  |
| 200 | 3 trous | 35 | 98 | 95   | 1/16-90° | 4,5 | 73  | 17   | 13 | 25 | 13 | 1414310053C13 | 1414310053C30         | 1414310054C13 | 1414310054C55 |  |

**pour mandrins GAMET type MAC : pas des stries 1,5 à 60°**

|     |         |    |    |      |         |     |     |      |    |    |    |               | hauteurs normales     |               |               |  |
|-----|---------|----|----|------|---------|-----|-----|------|----|----|----|---------------|-----------------------|---------------|---------------|--|
| 132 | 2 trous | 27 | 27 | 64   | 1,5-60° | 3,5 | 40  | 11   | 10 | 18 | 9  | 1443170053C00 | 1443170053C15         | 1443170054C00 | 1443170054C40 |  |
| 165 | 3 trous | 30 | 30 | 75   | 1,5-60° | 4,5 | 60  | 14   | 10 | 20 | 11 | 1443240053C00 | 1443240053C15         | 1443240054C00 | 1443240054C40 |  |
| 200 | 3 trous | 35 | 35 | 95   | 1,5-60° | 4,5 | 73  | 17   | 13 | 25 | 13 | 1443310053C00 | 1443310053C15         | 1443310054C00 | 1443310054C40 |  |
| 250 | 3 trous | 45 | 45 | 119  | 1,5-60° | 4,5 | 92  | 21   | 16 | 32 | 17 | 1443410053C00 | 1443410053C15         | 1443410054C00 | 1443410054C40 |  |
| 315 | 3 trous | 45 | 45 | 150  | 1,5-60° | 4,5 | 106 | 21   | 16 | 38 | 17 | 1443540053C00 | 1443540053C15         | 1443540054C00 | 1443540054C40 |  |
| 380 | 3 trous | 60 | 60 | 182  | 1,5-60° | 4,5 | 126 | 25,5 | 25 | 42 | 21 | 1443670053C00 | 1443670053C15         | 1443670054C00 | 1443670054C40 |  |
|     |         |    |    |      |         |     |     |      |    |    |    |               | hauteurs spéciales B1 |               |               |  |
| 132 | 2 trous | 27 | 48 | 63,5 | 1,5-60° | 3,5 | 40  | 11   | 10 | 18 | 9  | 1443170053C11 | 1443170053C20         | 1443170054C11 | 1443170054C45 |  |
| 165 | 3 trous | 30 | 58 | 75   | 1,5-60° | 4,5 | 60  | 14   | 10 | 20 | 11 | 1443240053C11 | 1443240053C20         | 1443240054C11 | 1443240054C45 |  |
| 200 | 3 trous | 34 | 58 | 95   | 1,5-60° | 4,5 | 73  | 17   | 13 | 25 | 13 | 1443310053C11 | 1443310053C20         | 1443310054C11 | 1443310054C45 |  |
| 250 | 3 trous | 45 | 78 | 119  | 1,5-60° | 4,5 | 92  | 21   | 16 | 32 | 17 | 1443410053C11 | 1443410053C20         | 1443410054C11 | 1443410054C45 |  |
| 315 | 3 trous | 45 | 98 | 150  | 1,5-60° | 4,5 | 106 | 21   | 16 | 38 | 17 | 1443540053C11 | 1443540053C20         | 1443540054C11 | 1443540054C45 |  |
|     |         |    |    |      |         |     |     |      |    |    |    |               | hauteurs spéciales B2 |               |               |  |
| 165 | 3 trous | 30 | 78 | 75   | 1,5-60° | 4,5 | 60  | 14   | 10 | 20 | 11 | 1443240053C12 | 1443240053C25         | 1443240054C12 | 1443240054C50 |  |
| 200 | 3 trous | 35 | 78 | 95   | 1,5-60° | 4,5 | 73  | 17   | 13 | 25 | 13 | 1443310053C12 | 1443310053C25         | 1443310054C12 | 1443310054C50 |  |
| 250 | 3 trous | 45 | 98 | 119  | 1,5-60° | 4,5 | 92  | 21   | 16 | 32 | 17 | 1443410053C12 | 1443410053C25         | 1443410054C12 | 1443410054C50 |  |
|     |         |    |    |      |         |     |     |      |    |    |    |               | hauteurs spéciales B3 |               |               |  |
| 200 | 3 trous | 35 | 98 | 95   | 1,5-60° | 4,5 | 73  | 17   | 13 | 25 | 13 | 1443310053C13 | 1443310053C30         | 1443310054C13 | 1443310054C55 |  |



| Ø mandrin | A | B | C | P | S | T | V | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

pour mandrins GOMET type super PI : pas des stries 1/16 à 90°

| hauteurs normales |         |    |    |      |          |     |       |    |    |    |    |               |               |               |               |
|-------------------|---------|----|----|------|----------|-----|-------|----|----|----|----|---------------|---------------|---------------|---------------|
| 105               | 2 trous | 21 | 25 | 51,5 | 1/16-90° | 3,5 | 32    | 10 | 8  | 15 | 9  | 1442120053C00 | 1442120053C15 | 1442120054C00 | 1442120054C40 |
| 130               | 2 trous | 27 | 27 | 63,5 | 1/16-90° | 3,5 | 36    | 11 | 10 | 18 | 9  | 1442170053C00 | 1442170053C15 | 1442170054C00 | 1442170054C40 |
| 160               | 3 trous | 35 | 35 | 77   | 1/16-90° | 3,5 | 58,5  | 11 | 9  | 20 | 9  | 1442230053C00 | 1442230053C15 | 1442230054C00 | 1442230054C40 |
| 215               | 3 trous | 34 | 44 | 102  | 1/16-90° | 3,5 | 64,5  | 14 | 10 | 22 | 11 | 1442340053C00 | 1442340053C15 | 1442340054C00 | 1442340054C40 |
| 250-280           | 3 trous | 48 | 48 | 130  | 1/16-90° | 4,5 | 87    | 20 | 13 | 30 | 13 | 1442410053C00 | 1442410053C15 | 1442410054C00 | 1442410054C40 |
| 350               | 3 trous | 49 | 58 | 170  | 1/16-90° | 5   | 112,5 | 21 | 22 | 40 | 17 | 1442610053C00 | 1442610053C15 | 1442610054C00 | 1442610054C40 |
| 450               | 3 trous | 68 | 78 | 220  | 1/16-90° | 6   | 150   | 30 | 25 | 50 | 21 | 1442720053C00 | 1442720053C15 | 1442720054C00 | 1442720054C40 |

| hauteurs spéciales B1 |         |    |    |      |          |     |      |    |    |    |    |               |               |               |               |
|-----------------------|---------|----|----|------|----------|-----|------|----|----|----|----|---------------|---------------|---------------|---------------|
| 130                   | 2 trous | 27 | 48 | 63,5 | 1/16-90° | 3,5 | 36   | 11 | 10 | 18 | 9  | 1442170053C11 | 1442170053C20 | 1442170054C11 | 1442170054C45 |
| 160                   | 3 trous | 35 | 58 | 77   | 1/16-90° | 3,5 | 58,5 | 11 | 9  | 20 | 9  | 1442230053C11 | 1442230053C20 | 1442230054C11 | 1442230054C45 |
| 215                   | 3 trous | 34 | 58 | 102  | 1/16-90° | 3,5 | 64,5 | 14 | 10 | 22 | 11 | 1442340053C11 | 1442340053C20 | 1442340054C11 | 1442340054C45 |
| 250-280               | 3 trous | 48 | 78 | 130  | 1/16-90° | 4,5 | 87   | 20 | 13 | 30 | 13 | 1442410053C11 | 1442410053C20 | 1442410054C11 | 1442410054C45 |

| hauteurs spéciales B2 |         |    |    |     |          |     |      |    |    |    |    |               |               |               |               |
|-----------------------|---------|----|----|-----|----------|-----|------|----|----|----|----|---------------|---------------|---------------|---------------|
| 160                   | 3 trous | 35 | 78 | 77  | 1/16-90° | 3,5 | 58,5 | 11 | 9  | 20 | 9  | 1442310053C12 | 1442310053C25 | 1442310054C12 | 1442310054C50 |
| 215                   | 3 trous | 34 | 78 | 102 | 1/16-90° | 3,5 | 64,5 | 14 | 10 | 22 | 11 | 1442340053C12 | 1442340053C25 | 1442410054C12 | 1442410054C50 |
| 250-280               | 3 trous | 48 | 98 | 130 | 1/16-90° | 4,5 | 87   | 20 | 13 | 30 | 13 | 1442540053C12 | 1442540053C25 | 1442540054C12 | 1442540054C50 |

| hauteurs spéciales B3 |         |    |    |     |          |     |      |    |    |    |    |               |               |               |               |
|-----------------------|---------|----|----|-----|----------|-----|------|----|----|----|----|---------------|---------------|---------------|---------------|
| 215                   | 3 trous | 35 | 98 | 102 | 1/16-90° | 3,5 | 58,5 | 11 | 9  | 20 | 9  | 1442340053C13 | 1442340053C30 | 1442310054C13 | 1442310054C55 |
| 250-280               | 3 trous | 48 | 98 | 130 | 1/16-90° | 3,5 | 64,5 | 14 | 10 | 22 | 11 | 1442410053C13 | 1442410053C30 | 1442410054C13 | 1442410054C55 |

pour mandrins GOMET type super PI : pas des stries 1,5 à 60°

| hauteurs normales |         |    |    |      |         |     |       |    |    |    |    |               |               |               |               |
|-------------------|---------|----|----|------|---------|-----|-------|----|----|----|----|---------------|---------------|---------------|---------------|
| 105               | 2 trous | 21 | 25 | 51,5 | 1,5-60° | 3,5 | 32    | 10 | 8  | 15 | 9  | 1430120053C00 | 1430120053C15 | 1430120054C00 | 1430120054C40 |
| 130               | 2 trous | 27 | 27 | 63,5 | 1,5-60° | 3,5 | 36    | 11 | 10 | 18 | 9  | 1430170053C00 | 1430170053C15 | 1430170054C00 | 1430170054C40 |
| 160               | 3 trous | 35 | 35 | 77   | 1,5-60° | 3,5 | 58,5  | 11 | 9  | 20 | 9  | 1430230053C00 | 1430230053C15 | 1430230054C00 | 1430230054C40 |
| 215               | 3 trous | 34 | 44 | 102  | 1,5-60° | 3,5 | 64,5  | 14 | 10 | 22 | 11 | 1430340053C00 | 1430340053C15 | 1430340054C00 | 1430340054C40 |
| 250-280           | 3 trous | 48 | 48 | 130  | 1,5-60° | 4,5 | 87    | 20 | 13 | 30 | 13 | 1430410053C00 | 1430410053C15 | 1430410054C00 | 1430410054C40 |
| 350               | 3 trous | 49 | 58 | 170  | 1,5-60° | 5   | 112,5 | 21 | 22 | 40 | 17 | 1430610053C00 | 1430610053C15 | 1430610054C00 | 1430610054C40 |
| 450               | 3 trous | 68 | 78 | 220  | 1,5-60° | 6   | 150   | 30 | 25 | 50 | 21 | 1430720053C00 | 1430720053C15 | 1430720054C00 | 1430720054C40 |

| hauteurs spéciales B1 |         |    |    |      |         |     |      |    |    |    |    |               |               |               |               |
|-----------------------|---------|----|----|------|---------|-----|------|----|----|----|----|---------------|---------------|---------------|---------------|
| 130                   | 2 trous | 27 | 48 | 63,5 | 1,5-60° | 3,5 | 36   | 11 | 10 | 18 | 9  | 1430170053C11 | 1430170053C20 | 1430170054C11 | 1430170054C45 |
| 160                   | 3 trous | 35 | 58 | 77   | 1,5-60° | 3,5 | 58,5 | 11 | 9  | 20 | 9  | 1430230053C11 | 1430230053C20 | 1430230054C11 | 1430230054C45 |
| 215                   | 3 trous | 34 | 58 | 102  | 1,5-60° | 3,5 | 64,5 | 14 | 10 | 22 | 11 | 1430340053C11 | 1430340053C20 | 1430340054C11 | 1430340054C45 |
| 250-280               | 3 trous | 48 | 78 | 130  | 1,5-60° | 4,5 | 87   | 20 | 13 | 30 | 13 | 1430410053C11 | 1430410053C20 | 1430410054C11 | 1430410054C45 |

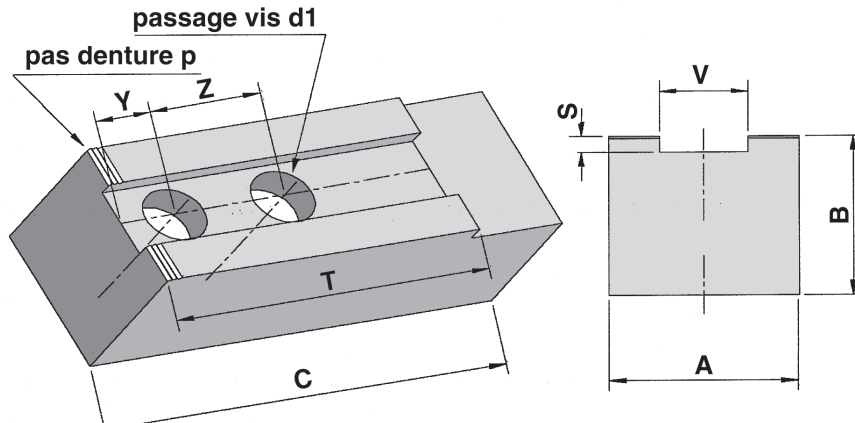
| hauteurs spéciales B2 |         |    |    |     |         |     |      |    |    |    |    |               |               |               |               |
|-----------------------|---------|----|----|-----|---------|-----|------|----|----|----|----|---------------|---------------|---------------|---------------|
| 160                   | 3 trous | 35 | 78 | 77  | 1,5-60° | 3,5 | 58,5 | 11 | 9  | 20 | 9  | 1430230053C12 | 1430230053C25 | 1430230054C12 | 1430230054C50 |
| 215                   | 3 trous | 34 | 78 | 102 | 1,5-60° | 3,5 | 64,5 | 14 | 10 | 22 | 11 | 1430410053C12 | 1430410053C25 | 1430410054C12 | 1430410054C50 |
| 250-280               | 3 trous | 48 | 98 | 130 | 1,5-60° | 4,5 | 87   | 20 | 13 | 30 | 13 | 1430540053C12 | 1430540053C25 | 1430540054C12 | 1430540054C50 |

| hauteurs spéciales B3 |         |    |    |     |         |     |      |    |    |    |    |               |               |               |               |
|-----------------------|---------|----|----|-----|---------|-----|------|----|----|----|----|---------------|---------------|---------------|---------------|
| 215                   | 3 trous | 35 | 98 | 102 | 1,5-60° | 3,5 | 58,5 | 11 | 9  | 20 | 9  | 1430340053C13 | 1430340053C30 | 1430310054C13 | 1430310054C55 |
| 250-280               | 3 trous | 48 | 98 | 130 | 1,5-60° | 3,5 | 64,5 | 14 | 10 | 22 | 11 | 1430410053C13 | 1430410053C30 | 1430410054C13 | 1430410054C55 |



# MORS DOUX RÉVERSIBLES À STRIES

pour mandrins AUTOBLOK et FORKARDT



| Ø mandrin | A | B | C | P | S | V | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

pour mandrins AUTOBLOK : pas des stries 1/16 à 90°

| Ø mandrin | A  | B  | C   | P        | S | V  | Y  | Z  | d1 | hauteurs normales |                  |               |                 |
|-----------|----|----|-----|----------|---|----|----|----|----|-------------------|------------------|---------------|-----------------|
|           |    |    |     |          |   |    |    |    |    | 3 mors            | 3 M fraisés 120° | 4 mors        | 4 M fraisés 90° |
| 125       | 30 | 30 | 70  | 1/16-90° | 4 | 12 | 15 | 16 | 9  | 1403160053C00     | 1403160053C15    | 1403160054C00 | 1403160054C40   |
| 170       | 35 | 35 | 70  | 1/16-90° | 5 | 14 | 16 | 16 | 11 | 1403250053C00     | 1403250053C15    | 1403250054C00 | 1403250054C40   |
| 200       | 40 | 40 | 90  | 1/16-90° | 5 | 17 | 20 | 23 | 13 | 1403310053C00     | 1403310053C15    | 1403310054C00 | 1403310054C40   |
| 250       | 45 | 45 | 110 | 1/16-90° | 6 | 21 | 20 | 30 | 17 | 1403410053C00     | 1403410053C15    | 1403410054C00 | 1403410054C40   |
| 315       | 50 | 50 | 125 | 1/16-90° | 6 | 21 | 22 | 30 | 17 | 1403540053C00     | 1403540053C15    | 1403540054C00 | 1403540054C40   |
| 400       | 60 | 60 | 140 | 1/16-90° | 6 | 21 | 25 | 34 | 17 | 1403710053C00     | 1403710053C15    | 1403710054C00 | 1403710054C40   |
| 500 - 630 | 60 | 60 | 160 | 3/32-90° | 6 | 28 | 25 | 38 | 21 | 1403730053C00     | 1403730053C15    | 1403730054C00 | 1403730054C40   |

| Ø mandrin | A  | B  | C   | P        | S | V  | Y  | Z  | d1 | hauteurs spéciales B1 |                  |               |                 |
|-----------|----|----|-----|----------|---|----|----|----|----|-----------------------|------------------|---------------|-----------------|
|           |    |    |     |          |   |    |    |    |    | 3 mors                | 3 M fraisés 120° | 4 mors        | 4 M fraisés 90° |
| 125       | 28 | 48 | 70  | 1/16-90° | 4 | 12 | 15 | 16 | 9  | 1403160053C11         | 1403160053C20    | 1403160054C11 | 1403160054C45   |
| 170       | 35 | 58 | 70  | 1/16-90° | 5 | 14 | 16 | 16 | 11 | 1403250053C11         | 1403250053C20    | 1403250054C11 | 1403250054C45   |
| 200       | 38 | 58 | 90  | 1/16-90° | 5 | 17 | 20 | 23 | 13 | 1403310053C11         | 1403310053C20    | 1403310054C11 | 1403310054C45   |
| 250       | 45 | 58 | 110 | 1/16-90° | 6 | 21 | 20 | 30 | 17 | 1403410053C11         | 1403410053C20    | 1403410054C11 | 1403410054C45   |
| 315       | 48 | 78 | 125 | 1/16-90° | 6 | 21 | 22 | 30 | 17 | 1403540053C11         | 1403540053C20    | 1403540054C11 | 1403540054C45   |

| Ø mandrin | A  | B  | C   | P        | S | V  | Y  | Z  | d1 | hauteurs spéciales B2 |                  |               |                 |
|-----------|----|----|-----|----------|---|----|----|----|----|-----------------------|------------------|---------------|-----------------|
|           |    |    |     |          |   |    |    |    |    | 3 mors                | 3 M fraisés 120° | 4 mors        | 4 M fraisés 90° |
| 170       | 35 | 78 | 70  | 1/16-90° | 5 | 14 | 16 | 16 | 11 | 1403250053C12         | 1403250053C25    | 1403250054C12 | 1403250054C50   |
| 200       | 38 | 78 | 90  | 1/16-90° | 5 | 17 | 20 | 23 | 13 | 1403310053C12         | 1403310053C25    | 1403310054C12 | 1403310054C50   |
| 250       | 45 | 78 | 110 | 1/16-90° | 6 | 21 | 20 | 30 | 17 | 1403410053C12         | 1403410053C25    | 1403410054C12 | 1403410054C50   |

| Ø mandrin | A  | B  | C   | P        | S | V  | Y  | Z  | d1 | hauteurs spéciales B3 |                  |               |                 |
|-----------|----|----|-----|----------|---|----|----|----|----|-----------------------|------------------|---------------|-----------------|
|           |    |    |     |          |   |    |    |    |    | 3 mors                | 3 M fraisés 120° | 4 mors        | 4 M fraisés 90° |
| 250       | 45 | 98 | 110 | 1/16-90° | 6 | 21 | 20 | 30 | 17 | 1403410053C13         | 1403410053C30    | 1403410054C13 | 1403410054C55   |

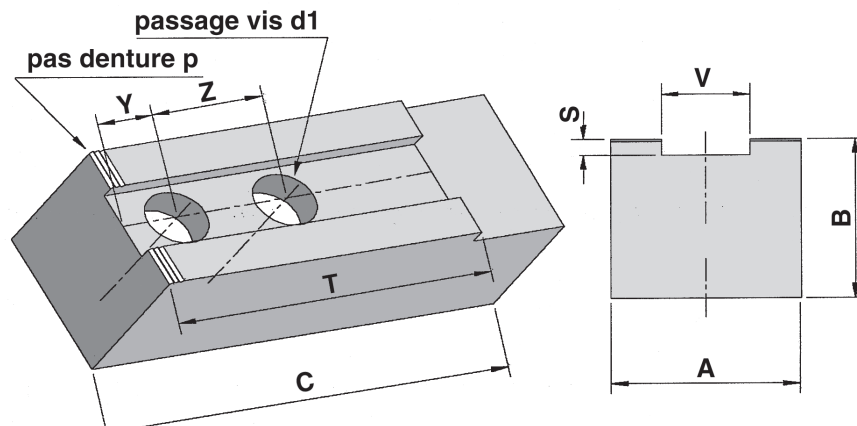
| Ø Mandrins | A | B | C | P | S | V | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|------------|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|            |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

pour mandrins FORKARDT type WB : pas des stries 1/16 à 90°

|         |         |    |    |     |          |   |      |    |    |    |               |               |               |               |
|---------|---------|----|----|-----|----------|---|------|----|----|----|---------------|---------------|---------------|---------------|
| 160     | WB11/70 | 39 | 58 | 70  | 1/16-90° | 4 | 17   | 15 | 22 | 13 | 1412230053E00 | 1412230053E15 | 1412230054E00 | 1412230054E40 |
| 200     | WB11/90 | 39 | 58 | 90  | 1/16-90° | 4 | 17   | 25 | 22 | 13 | 1412310053E00 | 1412310053E15 | 1412310054E00 | 1412310054E40 |
| 250-315 | WB12    | 49 | 78 | 120 | 1/16-90° | 4 | 21   | 30 | 28 | 17 | 1412410053E00 | 1412410053E15 | 1412410054E00 | 1412410054E40 |
| 315 AM  | WB13    | 59 | 88 | 140 | 1/16-90° | 5 | 25,5 | 30 | 35 | 21 | 1412540053E00 | 1412540053E15 | 1412540054E00 | 1412540054E40 |
| 400-500 | WB23    | 59 | 88 | 155 | 3/32-90° | 5 | 25,5 | 30 | 35 | 21 | 1412710053E00 | 1412710053E15 | 1412710054E00 | 1412710054E40 |

pour mandrins FORKARDT type 2 BLE : pas des stries 1/16 à 90°

|     |          |    |    |     |          |   |      |    |    |    |               |  |  |  |
|-----|----------|----|----|-----|----------|---|------|----|----|----|---------------|--|--|--|
| 200 | type BLE | 68 | 67 | 95  | 1/16-90° | 5 | 21   | 22 | 27 | 17 | 1412310152E00 |  |  |  |
| 250 | type BLE | 68 | 67 | 110 | 1/16-90° | 5 | 25,5 | 20 | 35 | 21 | 1412410152E00 |  |  |  |
| 315 | type BLE | 78 | 77 | 125 | 1/16-90° | 5 | 25,5 | 28 | 35 | 21 | 1412540152E00 |  |  |  |
| 400 | type BLE | 78 | 77 | 150 | 1/16-90° | 5 | 25,5 | 28 | 35 | 21 | 1412710152E00 |  |  |  |
| 500 | type BLE | 78 | 77 | 150 | 1/16-90° | 5 | 25,5 | 28 | 35 | 21 | 1412710152E00 |  |  |  |



| Ø mandrin | A | B | C | P | S | T | V | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

pour mandrins HOWA : pas des stries 1,5 à 60°

hauteurs normales

|        |    |    |     |         |     |    |    |    |    |    |               |               |               |               |
|--------|----|----|-----|---------|-----|----|----|----|----|----|---------------|---------------|---------------|---------------|
| 110    | 27 | 27 | 55  | 1,5-60° | 4   |    | 8  | 10 | 15 | 7  | 1416130053C00 | 1416130053C15 | 1416130054C00 | 1416130054C40 |
| 110    | 27 | 27 | 55  | 1,5-60° | 4   |    | 10 | 10 | 14 | 9  | 1416130153C00 | 1416130153C15 | 1416130154C00 | 1416130154C40 |
| 135    | 30 | 30 | 63  | 1,5-60° | 4   | 48 | 10 | 14 | 19 | 9  | 1416180053C00 | 1416180053C15 | 1416180054C00 | 1416180054C40 |
| 165    | 35 | 35 | 70  | 1,5-60° | 5   | 57 | 12 | 15 | 20 | 11 | 1416240053C00 | 1416240053C15 | 1416240054C00 | 1416240054C40 |
| 210R14 | 40 | 40 | 90  | 1,5-60° | 5,5 | 69 | 14 | 20 | 25 | 13 | 1416330053C00 | 1416330053C15 | 1416330054C00 | 1416330054C40 |
| 210R16 | 40 | 40 | 90  | 1,5-60° | 5,5 | 69 | 16 | 20 | 25 | 13 | 1415330053C00 | 1415330053C15 | 1415330054C00 | 1415330054C40 |
| 254R16 | 45 | 45 | 110 | 1,5-60° | 5,5 | 84 | 16 | 20 | 25 | 13 | 1415410053C00 | 1415410053C15 | 1415410054C00 | 1415410054C40 |
| 254R18 | 45 | 45 | 110 | 1,5-60° | 5,5 | 84 | 18 | 25 | 30 | 15 | 1415410153C00 | 1415410153C15 | 1415410154C00 | 1415410154C40 |
| 304R18 | 50 | 50 | 130 | 1,5-60° | 5,5 | 99 | 18 | 40 | 30 | 15 | 1416510053C00 | 1416510053C15 | 1416510054C00 | 1416510054C40 |
| 304R21 | 50 | 50 | 130 | 1,5-60° | 5,5 | 99 | 21 | 25 | 35 | 17 | 1415510053C00 | 1415510053C15 | 1415510054C00 | 1415510054C40 |

hauteurs spéciales B1

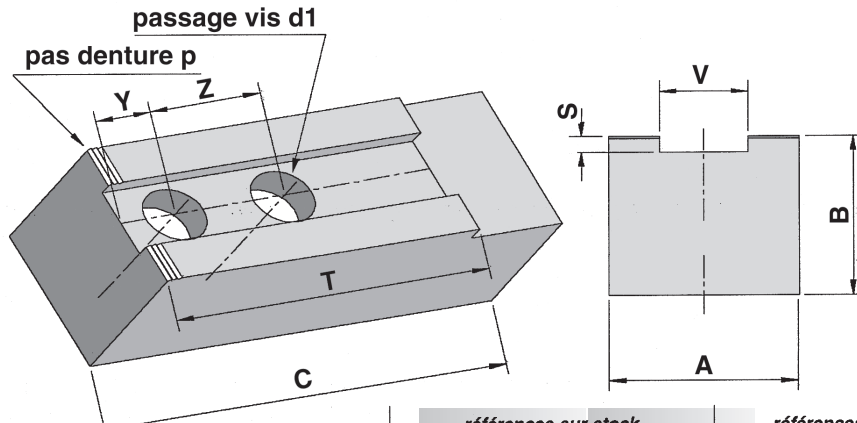
|        |    |    |     |         |     |    |    |    |    |    |               |               |               |               |
|--------|----|----|-----|---------|-----|----|----|----|----|----|---------------|---------------|---------------|---------------|
| 110    | 27 | 48 | 55  | 1,5-60° | 4   |    | 8  | 10 | 15 | 7  | 1415130053C11 | 1415130053C20 | 1415130054C11 | 1415130054C45 |
| 110    | 27 | 48 | 55  | 1,5-60° | 4   |    | 10 | 10 | 14 | 9  | 1416130153C11 | 1416130153C20 | 1416130154C11 | 1416130154C45 |
| 135    | 30 | 58 | 63  | 1,5-60° | 4   | 48 | 10 | 14 | 19 | 9  | 1416180053C11 | 1416180053C20 | 1416180054C11 | 1416180054C45 |
| 165    | 35 | 58 | 70  | 1,5-60° | 5   | 57 | 12 | 15 | 20 | 11 | 1416240053C11 | 1416240053C20 | 1416240054C11 | 1416240054C45 |
| 210R14 | 38 | 58 | 90  | 1,5-60° | 5,5 | 69 | 14 | 20 | 25 | 13 | 1416330053C11 | 1416330053C20 | 1416330054C11 | 1416330054C45 |
| 210R16 | 38 | 58 | 90  | 1,5-60° | 5,5 | 69 | 16 | 20 | 25 | 13 | 1415330053C11 | 1415330053C20 | 1415330054C11 | 1415330054C45 |
| 254R16 | 45 | 58 | 110 | 1,5-60° | 5,5 | 84 | 16 | 25 | 25 | 13 | 1415410053C11 | 1415410053C20 | 1415410054C11 | 1415410054C45 |
| 254R18 | 45 | 58 | 110 | 1,5-60° | 5,5 | 84 | 18 | 25 | 30 | 15 | 1415410153C11 | 1415410153C20 | 1415410154C11 | 1415410154C45 |
| 304R18 | 48 | 78 | 130 | 1,5-60° | 5,5 | 99 | 18 | 40 | 30 | 15 | 1416510053C11 | 1416510053C20 | 1416510054C11 | 1416510054C45 |
| 304R21 | 48 | 78 | 130 | 1,5-60° | 5,5 | 99 | 21 | 25 | 35 | 17 | 1415510053C11 | 1415510053C20 | 1415510054C11 | 1415510054C45 |

hauteurs spéciales B2

|        |    |    |     |         |     |    |    |    |    |    |               |               |               |               |
|--------|----|----|-----|---------|-----|----|----|----|----|----|---------------|---------------|---------------|---------------|
| 165    | 35 | 78 | 70  | 1,5-60° | 5   | 57 | 12 | 15 | 20 | 11 | 1416240053C12 | 1416240053C25 | 1416240054C12 | 1416240054C50 |
| 210R14 | 38 | 78 | 90  | 1,5-60° | 5,5 | 69 | 14 | 20 | 25 | 13 | 1416330053C12 | 1416330053C25 | 1416330054C12 | 1416330054C50 |
| 210R16 | 38 | 78 | 90  | 1,5-60° | 5,5 | 69 | 16 | 20 | 25 | 13 | 1415330053C12 | 1415330053C25 | 1415330054C12 | 1415330054C50 |
| 254R16 | 45 | 78 | 110 | 1,5-60° | 5,5 | 84 | 16 | 25 | 25 | 13 | 1415410053C12 | 1415410053C25 | 1415410054C12 | 1415410054C50 |
| 254R18 | 48 | 78 | 110 | 1,5-60° | 5,5 | 84 | 18 | 25 | 30 | 15 | 1415410153C12 | 1415410153C25 | 1415410154C12 | 1415410154C50 |
| 304R18 | 48 | 98 | 130 | 1,5-60° | 5,5 | 99 | 18 | 40 | 30 | 15 | 1416510053C12 | 1416510053C25 | 1416510054C12 | 1416510054C50 |
| 304R21 | 50 | 98 | 130 | 1,5-60° | 5,5 | 99 | 21 | 25 | 35 | 17 | 1415510053C12 | 1415510053C25 | 1415510054C12 | 1415510054C50 |

hauteurs spéciales B3

|        |    |    |     |         |     |    |    |    |    |    |               |               |               |               |
|--------|----|----|-----|---------|-----|----|----|----|----|----|---------------|---------------|---------------|---------------|
| 210R14 | 38 | 98 | 90  | 1,5-60° | 5,5 | 69 | 14 | 20 | 25 | 13 | 1416330053C13 | 1416330053C30 | 1416330054C13 | 1416330054C55 |
| 210R16 | 38 | 98 | 90  | 1,5-60° | 5,5 | 69 | 16 | 20 | 25 | 13 | 1415330053C13 | 1415330053C30 | 1415330054C13 | 1415330054C55 |
| 254R16 | 45 | 98 | 110 | 1,5-60° | 5,5 | 84 | 16 | 25 | 25 | 13 | 1415410053C13 | 1415410053C30 | 1415410054C13 | 1415410054C55 |
| 254R18 | 45 | 98 | 110 | 1,5-60° | 5,5 | 84 | 18 | 25 | 30 | 15 | 1415410153C13 | 1415410153C30 | 1415410154C13 | 1415410154C55 |



| Ø mandrin | A | B | C | P | S | T | V | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

pour mandrins KITA : pas des stries 1,5 à 60°

hauteurs normales

|        |    |    |     |         |     |    |    |    |    |    |               |               |               |               |
|--------|----|----|-----|---------|-----|----|----|----|----|----|---------------|---------------|---------------|---------------|
| 110    | 27 | 27 | 55  | 1,5-60° | 4   |    | 10 | 10 | 14 | 9  | 1416130153C00 | 1416130153C15 | 1416130154C00 | 1416130154C40 |
| 135    | 30 | 30 | 63  | 1,5-60° | 4   | 48 | 10 | 14 | 19 | 9  | 1416180053C00 | 1416180053C15 | 1416180054C00 | 1416180054C40 |
| 165    | 35 | 35 | 70  | 1,5-60° | 5   | 57 | 12 | 15 | 20 | 11 | 1416240053C00 | 1416240053C15 | 1416240054C00 | 1416240054C40 |
| 210R14 | 40 | 40 | 90  | 1,5-60° | 5,5 | 69 | 14 | 20 | 25 | 13 | 1416330053C00 | 1416330053C15 | 1416330054C00 | 1416330054C40 |
| 254R16 | 45 | 45 | 110 | 1,5-60° | 5,5 | 84 | 16 | 25 | 30 | 13 | 1416410053C00 | 1416410053C15 | 1416410054C00 | 1416410054C40 |
| 304R18 | 50 | 50 | 130 | 1,5-60° | 5,5 | 99 | 18 | 40 | 30 | 15 | 1416510053C00 | 1416510053C15 | 1416510054C00 | 1416510054C40 |

hauteurs spéciales B1

|        |    |    |     |         |     |    |    |    |    |    |               |               |               |               |
|--------|----|----|-----|---------|-----|----|----|----|----|----|---------------|---------------|---------------|---------------|
| 110    | 27 | 48 | 55  | 1,5-60° | 4   |    | 10 | 10 | 14 | 9  | 1416130153C11 | 1416130153C20 | 1416130154C11 | 1416130154C45 |
| 135    | 30 | 48 | 63  | 1,5-60° | 4   | 48 | 10 | 14 | 19 | 9  | 1416180053C11 | 1416180053C20 | 1416180054C11 | 1416180054C45 |
| 165    | 35 | 58 | 70  | 1,5-60° | 5   | 57 | 12 | 15 | 20 | 11 | 1416240053C11 | 1416240053C20 | 1416240054C11 | 1416240054C45 |
| 210R14 | 40 | 58 | 90  | 1,5-60° | 5,5 | 69 | 14 | 20 | 25 | 13 | 1416330053C11 | 1416330053C20 | 1416330054C11 | 1416330054C45 |
| 254R16 | 45 | 58 | 110 | 1,5-60° | 5,5 | 84 | 16 | 25 | 30 | 13 | 1416410053C11 | 1416410053C20 | 1416410054C11 | 1416410054C45 |
| 304R18 | 50 | 78 | 130 | 1,5-60° | 5,5 | 99 | 18 | 40 | 30 | 15 | 1416510053C11 | 1416510053C20 | 1416510054C11 | 1416510054C45 |

hauteurs spéciales B2

|        |    |    |     |         |     |    |    |    |    |    |               |               |               |               |
|--------|----|----|-----|---------|-----|----|----|----|----|----|---------------|---------------|---------------|---------------|
| 165    | 35 | 78 | 70  | 1,5-60° | 5   | 57 | 12 | 15 | 20 | 11 | 1416240053C12 | 1416240053C25 | 1416240054C12 | 1416240054C50 |
| 210R14 | 40 | 78 | 90  | 1,5-60° | 5,5 | 69 | 14 | 20 | 25 | 13 | 1416330053C12 | 1416330053C25 | 1416330054C12 | 1416330054C50 |
| 254R16 | 45 | 78 | 110 | 1,5-60° | 5,5 | 84 | 16 | 25 | 30 | 13 | 1416410053C12 | 1416410053C25 | 1416410054C12 | 1416410054C50 |
| 304R18 | 50 | 98 | 130 | 1,5-60° | 5,5 | 99 | 18 | 40 | 30 | 15 | 1416510053C12 | 1416510053C25 | 1416510054C12 | 1416510054C50 |

hauteurs spéciales B3

|        |    |    |     |         |     |    |    |    |    |    |               |               |               |               |
|--------|----|----|-----|---------|-----|----|----|----|----|----|---------------|---------------|---------------|---------------|
| 210R14 | 40 | 98 | 90  | 1,5-60° | 5,5 | 69 | 14 | 20 | 25 | 13 | 1416330053C13 | 1416330053C30 | 1416330054C13 | 1416330054C55 |
| 254R16 | 45 | 98 | 110 | 1,5-60° | 5,5 | 84 | 16 | 25 | 30 | 13 | 1416410053C13 | 1416410053C30 | 1416410054C13 | 1416410054C55 |

| Ø Mandrins | A | B | C | P | S | V | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|------------|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|            |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

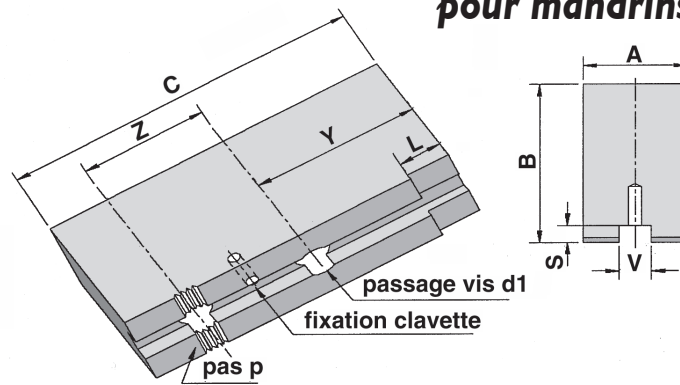
pour mandrins RÖHM : pas des stries 1/16 à 90°

|                 |      |    |     |          |     |  |      |    |    |    |               |               |               |               |
|-----------------|------|----|-----|----------|-----|--|------|----|----|----|---------------|---------------|---------------|---------------|
| 110-125-140     | 23   | 30 | 53  | 1/16-90° | 3,5 |  | 10   | 31 | 13 | 7  | 1428190053C00 | 1428190053C15 | 1428190054C00 | 1428190054C40 |
| 130             | 23   | 30 | 53  | 1/16-90° | 3,5 |  | 12   | 29 | 15 | 9  | 1428170053C00 | 1428170053C15 | 1428170054C00 | 1428170054C40 |
| 160             | 30   | 48 | 70  | 1/16-90° | 5   |  | 17   | 33 | 20 | 13 | 1428230053C00 | 1428230053C15 | 1428230054C00 | 1428230054C40 |
| 200             | 30   | 48 | 95  | 1/16-90° | 5   |  | 17   | 12 | 20 | 13 | 1428310053C00 | 1428310053C15 | 1428310054C00 | 1428310054C40 |
| 250             | 36,5 | 58 | 90  | 1/16-90° | 5   |  | 21   | 45 | 26 | 17 | 1428410053C00 | 1428410053C15 | 1428410054C00 | 1428410054C40 |
| 315             | 50   | 78 | 120 | 1/16-90° | 4   |  | 21   | 67 | 28 | 17 | 1428540053C00 | 1428540053C15 | 1428540054C00 | 1428540054C40 |
| 400-500-600-800 | 50   | 78 | 120 | 3/32-90° | 5   |  | 25,5 | 60 | 35 | 21 | 1428790053C00 | 1428790053C15 | 1428790054C00 | 1428790054C40 |



# MORS DOUX RÉVERSIBLES À STRIES

pour mandrins LADNER et SPEMO



| Ø mandrin | A | B | C | P | L | S | V | Y | Z | d1 | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|---|---|---|----|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   |   |   |   |    | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

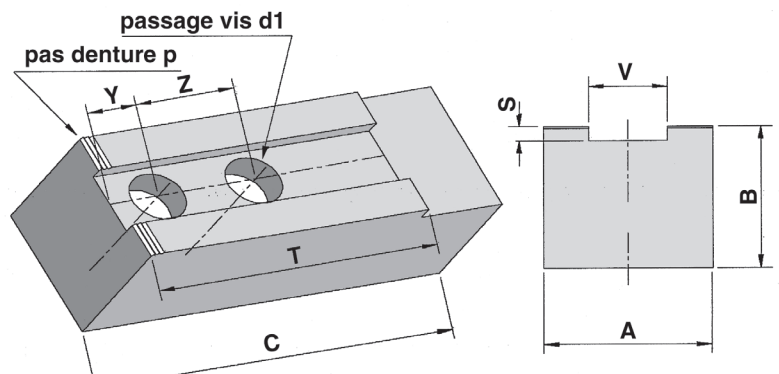
pour mandrins LADNER type D : pas des stries 2,5 à 60°

|         |       |      |    |     |         |      |   |    |       |    |    |               |               |               |               |
|---------|-------|------|----|-----|---------|------|---|----|-------|----|----|---------------|---------------|---------------|---------------|
| 160     | D23   | 23   | 38 | 70  | 2.5-60° |      | 4 | 6  | 22,5  | 25 | 9  | 1420230053C00 | 1420230053C15 | 1420230054C00 | 1420230054C40 |
| 200-215 | D28   | 28   | 48 | 93  | 2.5-60° |      | 5 | 8  | 31,25 | 30 | 11 | 1420310053C00 | 1420310053C15 | 1420310054C00 | 1420310054C40 |
| 250     | D33   | 34   | 58 | 113 | 2.5-60° |      | 6 | 10 | 36,25 | 40 | 13 | 1420410053C00 | 1420410053C15 | 1420410054C00 | 1420410054C40 |
| 315     | D33.5 | 34   | 58 | 123 | 2.5-60° |      | 6 | 10 | 41,25 | 40 | 13 | 1420540053C00 | 1420540053C15 | 1420540054C00 | 1420540054C40 |
| 350-400 | D38.5 | 38,5 | 68 | 140 | 2.5-60° | 17,5 | 7 | 12 | 63,75 | 50 | 15 | 1420710053C00 | 1420710053C15 | 1420710054C00 | 1420710054C40 |
| 500-630 | D48.5 | 48,5 | 78 | 170 | 2.5-60° | 20,5 | 8 | 14 | 66,25 | 60 | 17 | 1420730053C00 | 1420730053C15 | 1420730054C00 | 1420730054C40 |

| Ø mandrin | A | B | C | P | L | S | V | Y | Z | d1 | réf sur stock |
|-----------|---|---|---|---|---|---|---|---|---|----|---------------|
|           |   |   |   |   |   |   |   |   |   |    | 2 mors        |

pour mandrins LADNER type DE : pas des stries 2,5 à 60°

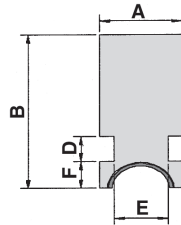
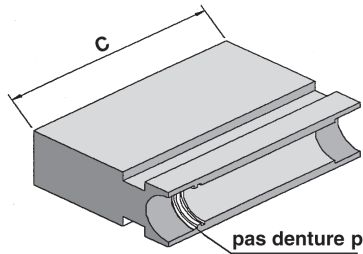
|         |        |    |    |     |         |  |   |    |       |    |    |               |
|---------|--------|----|----|-----|---------|--|---|----|-------|----|----|---------------|
| 160     | DE42   | 40 | 40 | 70  | 2.5-60° |  | 4 | 6  | 22,5  | 25 | 9  | 1420230052C00 |
| 200-215 | DE52   | 50 | 50 | 93  | 2.5-60° |  | 5 | 8  | 31,25 | 30 | 11 | 1420310052C00 |
| 250     | DE57   | 60 | 60 | 113 | 2.5-60° |  | 6 | 10 | 36,25 | 40 | 13 | 1420410052C00 |
| 315     | DE57.5 | 60 | 60 | 123 | 2.5-60° |  | 6 | 10 | 41,25 | 40 | 13 | 1420540052C00 |



| Mandrins | A | B | C | P | S | T | V | Y | Z | d1 | 3 mors | 3 M fraisés 120° | 4 mors | 4 M fraisés 90° |
|----------|---|---|---|---|---|---|---|---|---|----|--------|------------------|--------|-----------------|
|          |   |   |   |   |   |   |   |   |   |    |        |                  |        |                 |

Ø mandrin S.P.E.M.O. : pas des stries 2 à 60°

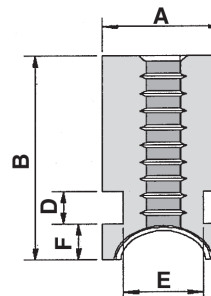
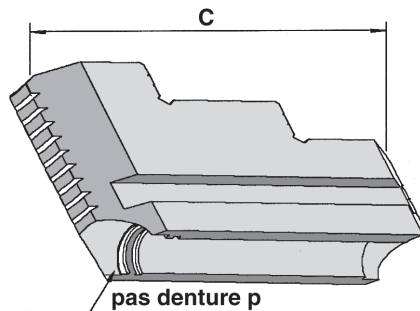
| hauteurs normales     |    |    |     |       |     |    |    |    |      |    |               |               |               |               |
|-----------------------|----|----|-----|-------|-----|----|----|----|------|----|---------------|---------------|---------------|---------------|
| 135                   | 27 | 27 | 68  | 2-60° | 4,5 | 40 | 10 | 9  | 15,5 | 9  | 1429180053C00 | 1429180053C15 | 1429180054C00 | 1429180054C40 |
| 165                   | 35 | 35 | 78  | 2-60° | 4,5 | 50 | 12 | 17 | 22   | 11 | 1429240053C00 | 1429240053C15 | 1429240054C00 | 1429240054C40 |
| 190                   | 35 | 35 | 95  | 2-60° | 4,5 | 64 | 12 | 25 | 22   | 11 | 1429290053C00 | 1429290053C15 | 1429290054C00 | 1429290054C40 |
| 224                   | 50 | 50 | 110 | 2-60° | 4,5 | 70 | 16 | 32 | 25   | 13 | 1429350053C00 | 1429350053C15 | 1429350054C00 | 1429350054C40 |
| 300                   | 48 | 58 | 118 | 2-60° | 4,5 | 72 | 20 | 16 | 40   | 15 | 1429510053C00 | 1429510053C15 | 1429510054C00 | 1429510054C40 |
| hauteurs spéciales B1 |    |    |     |       |     |    |    |    |      |    |               |               |               |               |
| 135                   | 27 | 48 | 68  | 2-60° | 4,5 | 40 | 10 | 9  | 15,5 | 9  | 1429180053C11 | 1429180053C20 | 1429180054C11 | 1429180054C45 |
| 165                   | 35 | 58 | 78  | 2-60° | 4,5 | 50 | 12 | 17 | 22   | 11 | 1429240053C11 | 1429240053C20 | 1429240054C11 | 1429240054C45 |
| 190                   | 35 | 78 | 95  | 2-60° | 4,5 | 64 | 12 | 25 | 22   | 11 | 1429290053C11 | 1429290053C20 | 1429290054C11 | 1429290054C45 |
| 224                   | 48 | 78 | 110 | 2-60° | 4,5 | 70 | 16 | 32 | 25   | 13 | 1429350053C11 | 1429350053C20 | 1429350054C11 | 1429350054C45 |
| hauteurs spéciales B2 |    |    |     |       |     |    |    |    |      |    |               |               |               |               |
| 165                   | 35 | 78 | 78  | 2-60° | 4,5 | 50 | 12 | 17 | 22   | 11 | 1429240053C12 | 1429240053C25 | 1429240054C12 | 1429240054C50 |
| 190                   | 35 | 98 | 95  | 2-60° | 4,5 | 64 | 12 | 25 | 22   | 11 | 1429290053C12 | 1429290053C25 | 1429290054C12 | 1429290054C50 |
| 224                   | 48 | 98 | 110 | 2-60° | 4,5 | 70 | 16 | 32 | 25   | 13 | 1429350053C12 | 1429350053C25 | 1429350054C12 | 1429350054C50 |



| Ø mandrin | A | B | C | D | E | F | filetage |      | références sur stock |                  | références sur demande |                 |
|-----------|---|---|---|---|---|---|----------|------|----------------------|------------------|------------------------|-----------------|
|           |   |   |   |   |   |   | p        | Diam | 3 mors               | 3 M fraisés 120° | 4 mors                 | 4 M fraisés 90° |

Mors doux pour mandrins à combinaisons LADNER

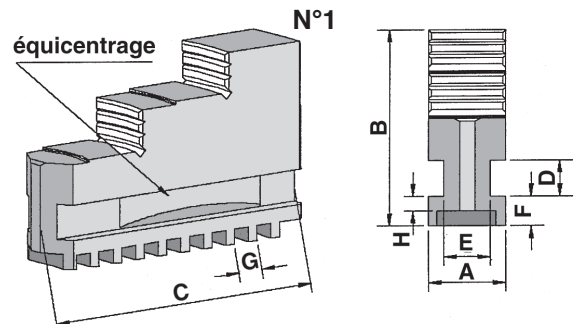
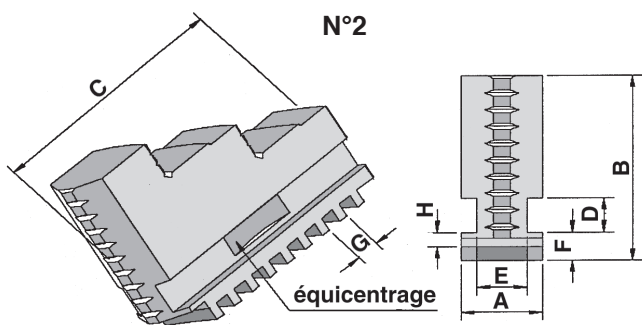
|             |    |    |     |    |    |     |       |      |                |                |                |                |
|-------------|----|----|-----|----|----|-----|-------|------|----------------|----------------|----------------|----------------|
| 160-200-215 | 24 | 58 | 70  | 9  | 14 | 9,5 | 3 à G | 17   | 1420230073 E00 | 1420230073 E15 | 1420230074 E00 | 1420230074 E40 |
| 250-315     | 32 | 74 | 98  | 12 | 21 | 13  | 4 à G | 25   | 1420410073 E00 | 1420410073 E15 | 1420410074 E00 | 1420410074 E40 |
| 400         | 38 | 87 | 123 | 13 | 27 | 10  | 5 à G | 29,5 | 1420710073 E00 | 1420710073 E15 | 1420710074 E00 | 1420710074 E40 |



| Ø Mandrins | A | B | C | D | E | F | filetage |      | références sur stock |        |
|------------|---|---|---|---|---|---|----------|------|----------------------|--------|
|            |   |   |   |   |   |   | p        | Diam | 3 mors               | 4 mors |

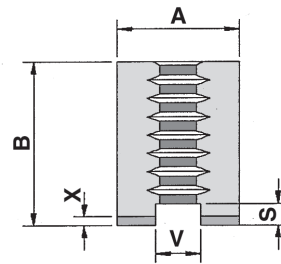
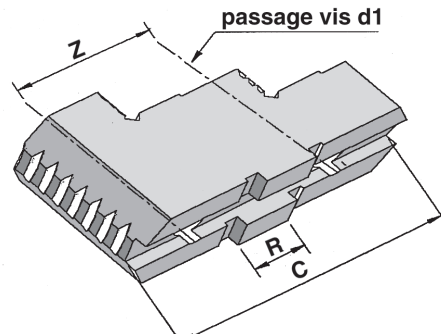
Mors durs pour mandrins à combinaisons LADNER

|         |    |    |     |    |    |     |       |      |               |               |
|---------|----|----|-----|----|----|-----|-------|------|---------------|---------------|
| 160     | 24 | 55 | 65  | 9  | 14 | 9,5 | 3 à G | 17   | 1220230073F00 | 1220230074F00 |
| 200-215 | 24 | 62 | 76  | 9  | 14 | 9,5 | 3 à G | 17   | 1220310073F00 | 1220310074F00 |
| 250     | 32 | 74 | 92  | 12 | 21 | 13  | 4 à G | 25   | 1220410073F00 | 1220410074F00 |
| 315     | 32 | 74 | 106 | 12 | 21 | 13  | 4 à G | 25   | 1220540073F00 | 1220540074F00 |
| 400     | 38 | 86 | 133 | 13 | 27 | 13  | 5 à G | 29,5 | 1220710073F00 | 1220710074F00 |
| 500     | 38 | 86 | 155 | 13 | 27 | 13  | 5 à G | 29,5 | 1220730073F00 | 1220730074F00 |



éqúicentrés pour mandrins à serrage concentrique LADNER

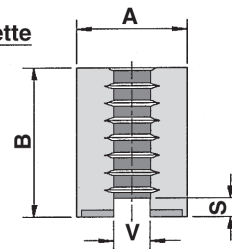
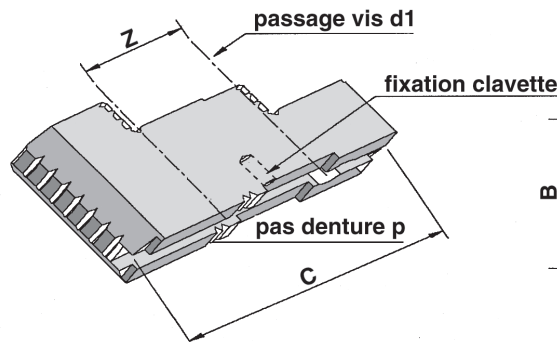
| Ø mandrin   | L   | A  | B    | C   | D  | E   | F   | G   | H | 1120020013F00 | 1120020013F00 |               |               |
|-------------|-----|----|------|-----|----|-----|-----|-----|---|---------------|---------------|---------------|---------------|
| 57 à levier | L9  | 9  | 25   | 25  | 4  | 4,5 | 4   | 4   |   | 1120020013F00 | 1120020013F00 |               |               |
| 97 à levier | L14 | 14 | 37   | 43  | 6  | 7,2 | 5,8 | 5,5 |   | 1120100013F01 | 1120100013F02 |               |               |
| 80          | L12 | 12 | 30   | 30  | 5  | 5,8 | 4,5 | 4,5 |   | 1120070013F01 | 1120070013F02 | 1120070014F01 | 1120070014F02 |
| 100         | L14 | 14 | 37   | 43  | 6  | 7,2 | 5,8 | 5,5 |   | 1120110013F01 | 1120110013F02 | 1120110014F01 | 1120110014F02 |
| 125         | L18 | 18 | 42,5 | 51  | 8  | 10  | 7   | 6,5 |   | 1120160013F01 | 1120160013F02 | 1120160014F01 | 1120160014F02 |
| 160         | L20 | 20 | 47,5 | 61  | 9  | 12  | 8   | 7   |   | 1120230013F01 | 1120230013F02 | 1120230014F01 | 1120230014F02 |
| 200-215     | L23 | 23 | 57,5 | 80  | 10 | 14  | 9   | 9   |   | 1120310013F01 | 1120310013F02 | 1120310014F01 | 1120310014F02 |
| 250         | L25 | 25 | 66   | 98  | 12 | 15  | 10  | 9   |   | 1120410013F01 | 1120410013F02 | 1120410014F01 | 1120410014F02 |
| 315         | L33 | 33 | 77   | 118 | 13 | 19  | 10  | 9   |   | 1120540013F01 | 1120540013F02 | 1120540014F01 | 1120540014F02 |
| 350-400     | L37 | 37 | 87   | 130 | 14 | 21  | 11  | 10  |   | 1120710013F01 | 1120710013F02 | 1120710014F01 | 1120710014F02 |
| 500         | L48 | 48 | 97   | 162 | 15 | 31  | 13  | 12  |   | 1120730013F01 | 1120730013F02 | 1120730014F01 | 1120730014F02 |
| 630         | L48 | 48 | 123  | 180 | 15 | 31  | 15  | 12  |   | 1120750013F01 | 1120750013F02 | 1120750014F01 | 1120750014F02 |



| $\emptyset$ mandrin | A | B | C | R | S | V | X | Z | d1 | 3 mors | 4 mors |
|---------------------|---|---|---|---|---|---|---|---|----|--------|--------|
|---------------------|---|---|---|---|---|---|---|---|----|--------|--------|

Reversibles type ISO

|         |      |    |       |       |    |      |   |      |    |               |               |
|---------|------|----|-------|-------|----|------|---|------|----|---------------|---------------|
| 125     | 20   | 36 | 52    | 12,67 | 7  | 7,9  | 3 | 32   | 9  | 1220160043F00 | 1220160044F00 |
| 160     | 25   | 39 | 66,5  | 12,67 | 7  | 7,9  | 3 | 38   | 9  | 1220230043F00 | 1220230044F00 |
| 200     | 28   | 47 | 88,4  | 12,67 | 7  | 7,9  | 3 | 44,5 | 9  | 1220310043F00 | 1220310044F00 |
| 250     | 33   | 53 | 102   | 19,02 | 7  | 12,7 | 3 | 54   | 13 | 1220410043F00 | 1220410044F00 |
| 315     | 38   | 57 | 118,3 | 19,02 | 7  | 12,7 | 3 | 63,5 | 13 | 1220540043F00 | 1220540044F00 |
| 350-400 | 43   | 73 | 139,2 | 19,02 | 10 | 12,7 | 6 | 76,2 | 17 | 1220710043F00 | 1220710044F00 |
| 500-630 | 48,5 | 83 | 140   | 19,02 | 10 | 12,7 | 6 | 76,2 | 21 | 1220730043F00 | 1220730044F00 |

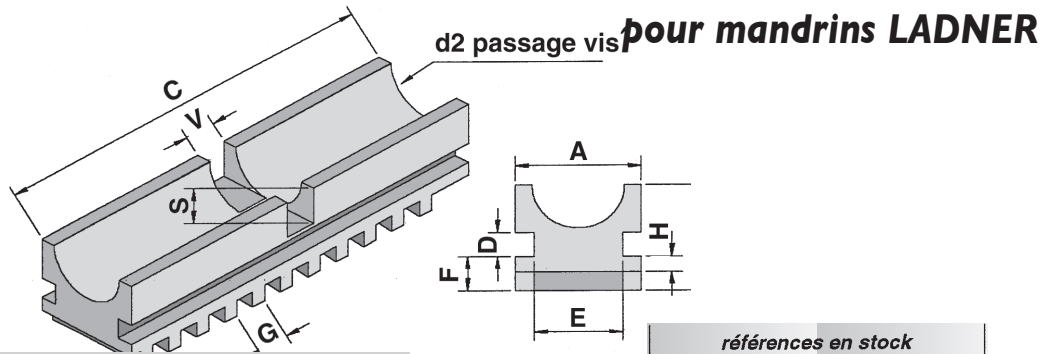


| $\emptyset$ mandrin | A | B | C | P | S | V | Z | d1 | 3 mors | 4 mors |
|---------------------|---|---|---|---|---|---|---|----|--------|--------|
|---------------------|---|---|---|---|---|---|---|----|--------|--------|

Reversibles STRIES

|         |      |    |       |         |     |      |    |    |               |               |
|---------|------|----|-------|---------|-----|------|----|----|---------------|---------------|
| 160     | 23   | 34 | 65    | 2,5-60° | 4,2 | 5,9  | 25 | 9  | 1220230053F00 | 1220230054F00 |
| 200-215 | 27   | 44 | 85    | 2,5-60° | 5,2 | 7,9  | 30 | 11 | 1220310053F00 | 1220310054F00 |
| 250     | 30   | 50 | 100   | 2,5-60° | 6,2 | 9,9  | 40 | 13 | 1220410053F00 | 1220410054F00 |
| 315     | 33   | 55 | 112,5 | 2,5-60° | 6,2 | 9,9  | 40 | 13 | 1220540053F00 | 1220540054F00 |
| 350-400 | 38   | 65 | 125   | 2,5-60° | 7,2 | 11,9 | 50 | 15 | 1220710053F00 | 1220710054F00 |
| 500-630 | 48,5 | 77 | 160   | 2,5-60° | 8,2 | 13,9 | 60 | 17 | 1220730053F00 | 1220730054F00 |





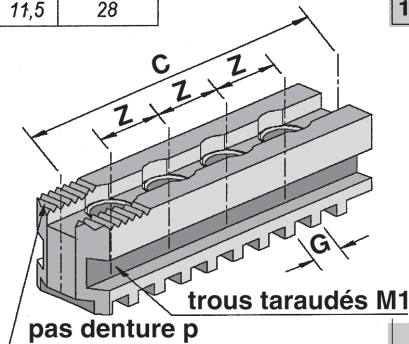
| Ø mandrin | A | B | C | D | E | F | G | S | V | d2 |
|-----------|---|---|---|---|---|---|---|---|---|----|
|-----------|---|---|---|---|---|---|---|---|---|----|

| références en stock |            |
|---------------------|------------|
| 3 semelles          | 4 semelles |

**Semelles pour mandrins à combinaisons**

|         |    |      |     |   |    |    |    |      |      |    |
|---------|----|------|-----|---|----|----|----|------|------|----|
| 160     | 24 | 23,5 | 62  | 6 | 14 | 8  | 7  | 8,1  | 7,5  | 16 |
| 200-215 | 24 | 24,5 | 72  | 6 | 14 | 9  | 9  | 8,1  | 7,5  | 16 |
| 250     | 32 | 32   | 85  | 8 | 21 | 10 | 9  | 12,1 | 9,5  | 24 |
| 315     | 32 | 32   | 98  | 8 | 21 | 10 | 9  | 12,1 | 9,5  | 24 |
| 400     | 38 | 34,5 | 123 | 8 | 27 | 11 | 10 | 14,1 | 11,5 | 28 |
| 500     | 38 | 34,5 | 145 | 8 | 27 | 11 | 12 | 14,1 | 11,5 | 28 |

|               |               |
|---------------|---------------|
| 1620230073F00 | 1620230074F00 |
| 1620310073F00 | 1620310074F00 |
| 1620410073F00 | 1620410074F00 |
| 1620540073F00 | 1620540074F00 |
| 1620710073F00 | 1620710074F00 |
| 1620730073F00 | 1620730074F00 |



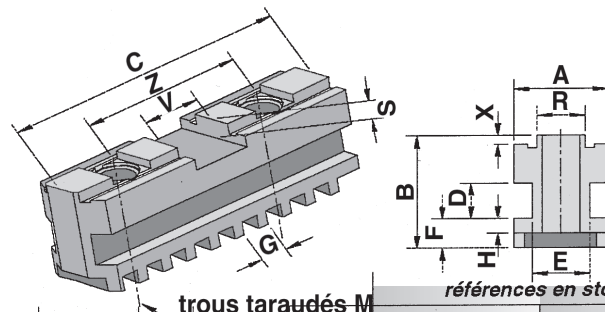
| Ø mandrin | A | B | C | D | E | F | G | S | V | Z | M1 | p |
|-----------|---|---|---|---|---|---|---|---|---|---|----|---|
|-----------|---|---|---|---|---|---|---|---|---|---|----|---|

| références en stock |            |
|---------------------|------------|
| 3 semelles          | 4 semelles |

**Semelles à stries pas de 2,5 à 60°**

|         |    |    |     |    |    |    |    |     |      |      |     |           |
|---------|----|----|-----|----|----|----|----|-----|------|------|-----|-----------|
| 160     | 20 | 30 | 60  | 9  | 12 | 8  | 7  | 4,2 | 5,9  | 12,5 | M8  | 2,5 à 60° |
| 200-215 | 23 | 34 | 80  | 10 | 14 | 9  | 9  | 5,2 | 7,9  | 15   | M10 | 2,5 à 60° |
| 250     | 25 | 38 | 95  | 12 | 15 | 10 | 9  | 6,2 | 9,9  | 20   | M12 | 2,5 à 60° |
| 315     | 33 | 40 | 105 | 13 | 19 | 10 | 9  | 6,2 | 9,9  | 20   | M12 | 2,5 à 60° |
| 400     | 37 | 48 | 120 | 14 | 21 | 11 | 10 | 7,2 | 11,9 | 25   | M14 | 2,5 à 60° |
| 500     | 48 | 55 | 150 | 15 | 31 | 13 | 12 | 8,2 | 13,9 | 30   | M16 | 2,5 à 60° |

|               |               |
|---------------|---------------|
| 1620230053F00 | 1620230054F00 |
| 1620310053F00 | 1620310054F00 |
| 1620410053F00 | 1620410054F00 |
| 1620540053F00 | 1620540054F00 |
| 1620710053F00 | 1620710054F00 |
| 1620730053F00 | 1620730054F00 |



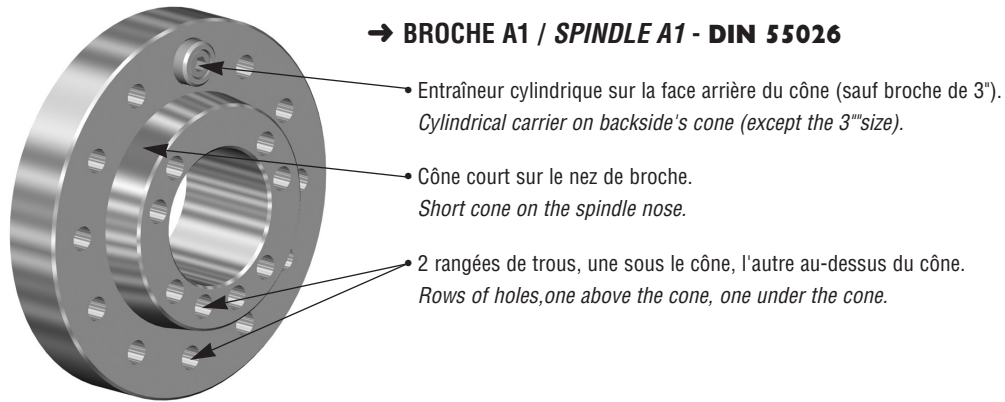
| Ø mandrin | A | B | C | D | E | F | G | R | S | V | X | Z | M1 |
|-----------|---|---|---|---|---|---|---|---|---|---|---|---|----|
|-----------|---|---|---|---|---|---|---|---|---|---|---|---|----|

| références en stock |            |
|---------------------|------------|
| 3 semelles          | 4 semelles |

**Semelles type ISO**

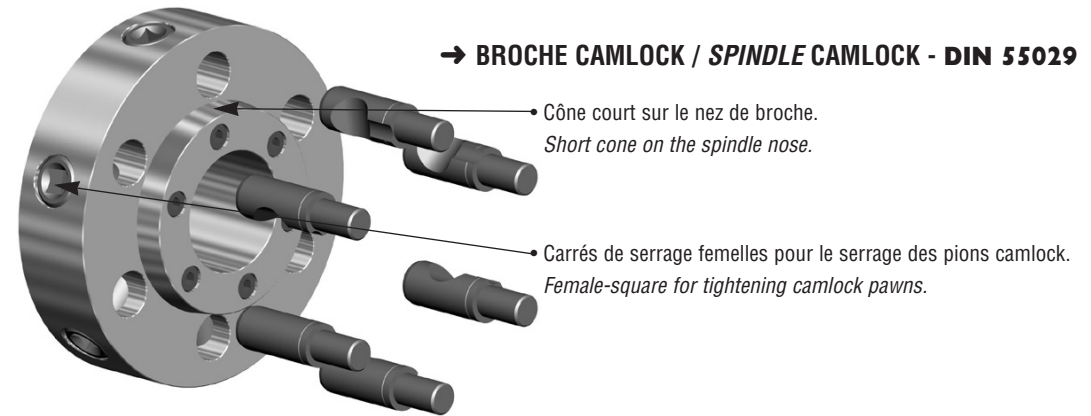
|         |    |    |     |    |    |    |     |      |    |        |   |      |     |               |               |
|---------|----|----|-----|----|----|----|-----|------|----|--------|---|------|-----|---------------|---------------|
| 125     | 18 | 27 | 45  | 8  | 10 | 7  | 6,5 | 7,94 | 7  | 12,675 | 3 | 32   | M8  | 1620160043F00 | 1620160044F00 |
| 160     | 20 | 30 | 60  | 9  | 12 | 8  | 7   | 7,94 | 7  | 12,675 | 3 | 38   | M10 | 1620230043F00 | 1620230044F00 |
| 200-215 | 23 | 34 | 80  | 10 | 14 | 9  | 9   | 7,94 | 7  | 12,675 | 3 | 44,5 | M10 | 1620310043F00 | 1620310044F00 |
| 250     | 25 | 38 | 95  | 12 | 15 | 10 | 9   | 12,7 | 7  | 19,025 | 3 | 54   | M12 | 1620410043F00 | 1620410044F00 |
| 315     | 33 | 40 | 108 | 13 | 19 | 10 | 9   | 12,7 | 7  | 19,025 | 3 | 63,5 | M12 | 1620540043F00 | 1620540044F00 |
| 350-400 | 37 | 48 | 128 | 14 | 21 | 11 | 10  | 12,7 | 10 | 3      | 3 | 2    | M16 | 1620710043F00 | 1620710044F00 |
| 500     | 48 | 55 | 165 | 15 | 31 | 13 | 12  | 12,7 | 10 | 3      | 3 | 2    | M20 | 1620730043F00 | 1620730044F00 |
| 630     | 48 | 65 | 203 | 15 | 31 | 15 | 12  | 12,7 | 10 | 3      | 3 | 2    | M20 | 1620750043F00 | 1620750044F00 |

| <b>SOMMAIRE CATALOGUE MANDRINS</b>   | <b>PAGE</b>  |
|--|--------------|
| <b>Descriptifs et Normes des BROCHES COURANTES (Nez de Broche)</b>               | <b>2-3</b>   |
| <b>Tableau des CAPACITES de SERRAGE des Mandrins</b>                             | <b>4-5</b>   |
| <b>VUES ECLATEES des Mandrins</b>  | <b>6-7</b>   |
| <br>   |              |
| <b>Mandrins Serrage Concentrique - CONTRE-PLATEAU (DIN 6351)</b>                 | <b>10-11</b> |
| <b>Mandrins Serrage Concentrique – Direct sur Broche (DIN 55026)</b>             | <b>12-13</b> |
| <b>Mandrins Serrage Concentrique – Direct sur Broche Baïonnettes (DIN 55027)</b> | <b>14-15</b> |
| <b>Mandrins Serrage Concentrique – Direct sur Broche CAMLOCK (DIN 55029)</b>     | <b>16-17</b> |
| <br>   |              |
| <b>Mandrins 4 Mors INDEPENDANTS - CONTRE-PLATEAU (DIN 6351)</b>                  | <b>24</b>    |
| <b>Mandrins 4 Mors INDEPENDANTS - Direct sur Broche (DIN 55026)</b>              | <b>25</b>    |
| <b>Mandrins 4 Mors INDEPENDANTS - Direct sur Broche Baïonnettes (DIN 55027)</b>  | <b>26</b>    |
| <b>Mandrins 4 Mors INDEPENDANTS - Direct sur Broche CAMLOCK (DIN 55029)</b>      | <b>27</b>    |
| <br>   |              |
| <b>PLATEAUX Grandes capacités</b>  | <b>28</b>    |
| <b>CONTRE-PLATEAUX d’adaptation Mandrin-Broche (Faux plateau)</b>                | <b>29</b>    |
| <b>ACCESSOIRES Mandrins</b>  | <b>31</b>    |



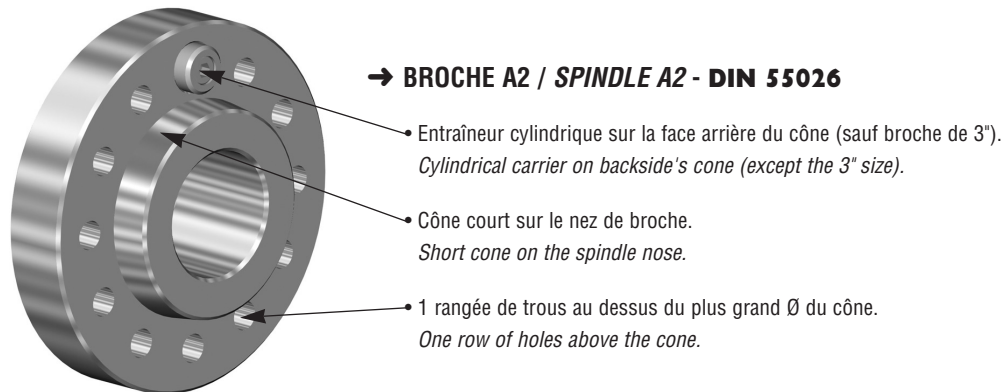
→ **BROCHE A1 / SPINDLE A1 - DIN 55026**

- Entraîneur cylindrique sur la face arrière du cône (sauf broche de 3").  
*Cylindrical carrier on backside's cone (except the 3" size).*
- Cône court sur le nez de broche.  
*Short cone on the spindle nose.*
- 2 rangées de trous, une sous le cône, l'autre au-dessus du cône.  
*Rows of holes, one above the cone, one under the cone.*



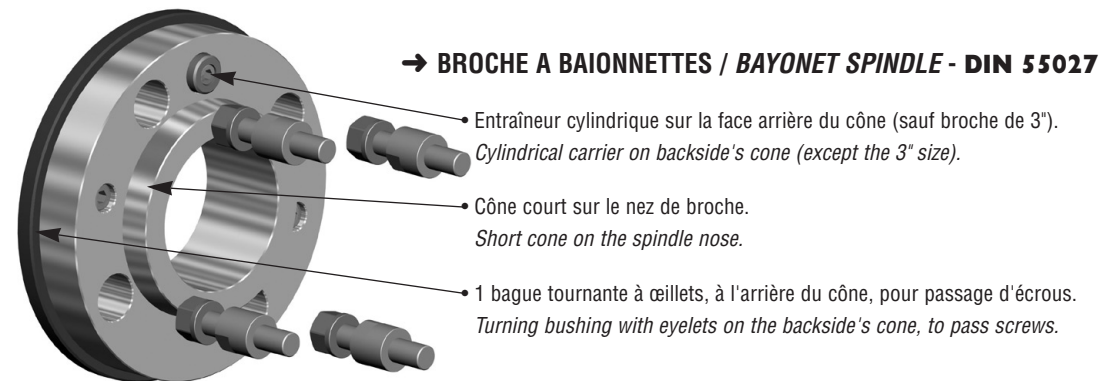
→ **BROCHE CAMLOCK / SPINDLE CAMLOCK - DIN 55029**

- Cône court sur le nez de broche.  
*Short cone on the spindle nose.*
- Carrés de serrage femelles pour le serrage des pions camlock.  
*Female-square for tightening camlock pawns.*



→ **BROCHE A2 / SPINDLE A2 - DIN 55026**

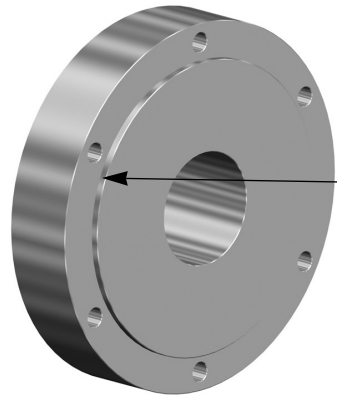
- Entraîneur cylindrique sur la face arrière du cône (sauf broche de 3").  
*Cylindrical carrier on backside's cone (except the 3" size).*
- Cône court sur le nez de broche.  
*Short cone on the spindle nose.*
- 1 rangée de trous au dessus du plus grand Ø du cône.  
*One row of holes above the cone.*



→ **BROCHE A BAIONNETTES / BAYONET SPINDLE - DIN 55027**

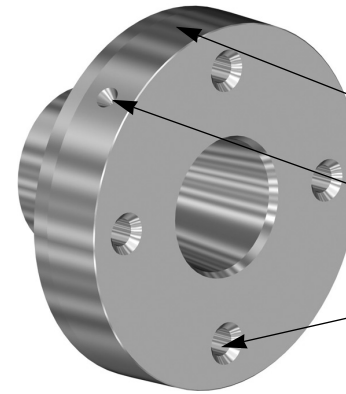
- Entraîneur cylindrique sur la face arrière du cône (sauf broche de 3").  
*Cylindrical carrier on backside's cone (except the 3" size).*
- Cône court sur le nez de broche.  
*Short cone on the spindle nose.*
- 1 bague tournante à œillets, à l'arrière du cône, pour passage d'écrous.  
*Turning bushing with eyelets on the backside's cone, to pass screws.*

# BROCHES COURANTES / *current spindles*



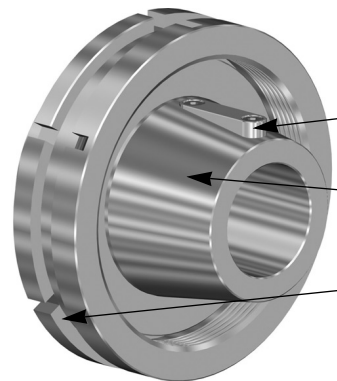
## → BROCHE A CENTRAGE CYLINDRIQUE / SPINDLE CYLINDRICAL CENTERING - DIN 6350

- Un centrage cylindrique mâle sur la face de la broche.  
*One male cylindrical centering on the face of the spindle.*



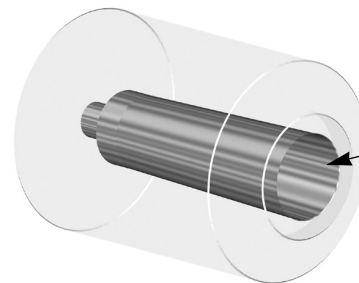
## → BROCHE CAZENEUVE / SPINDLE CAZENEUVE

- Cône court sur le nez de broche.  
*Short cone on the spindle nose.*
- 3 logements conçus pour vis pointeau, sur le cône de la broche;  
*3 cone positions for set screws on the spindle cone.*
- 4 trous de fixation sur la face avant du nez de broche.  
*4 holes for passage of fixing screws on the front cone.*



## → BROCHE TYPE L / SPINDLE TYPE L - ASA B 5.9

- Une clavette d'entraînement.  
*Pin feeding.*
- Cône mâle long.  
*Long male cone.*
- 1 bague tournante filetée assurant la fixation des mandrins.  
*Turning bushing, for tightening chuck.*

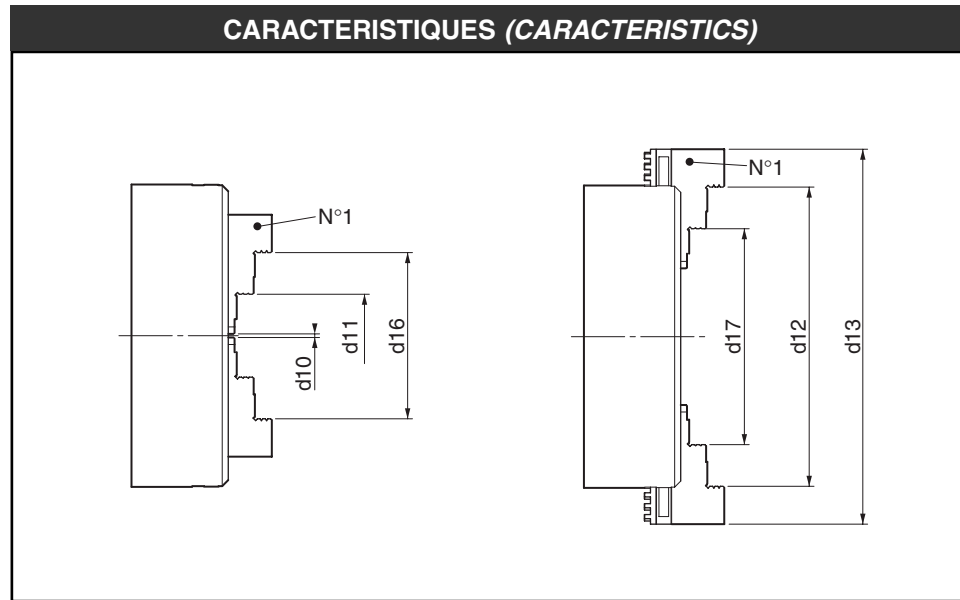
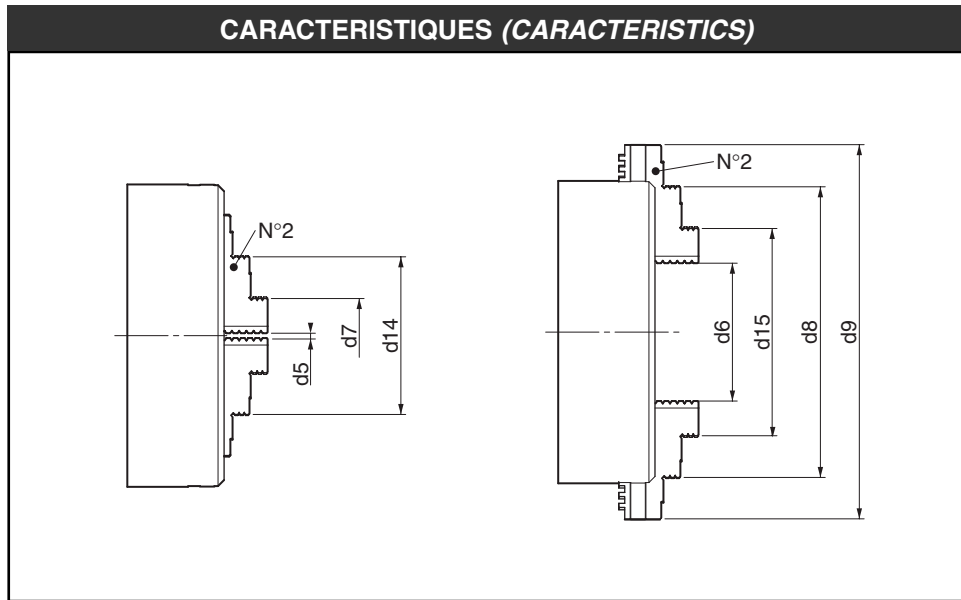


## → BROCHE A CONE MORSE / MORSE TAPER-SPINDLE

- Cône femelle long à environ 5 %.  
*Long female cone (5 %).*

# CAPACITE DE SERRAGE DES MANDRINS A SERRAGE CONCENTRIQUE EN MORS MONOBLOC

Ø CAPACITY TO TIGHT WITH MONOBLOC JAWS

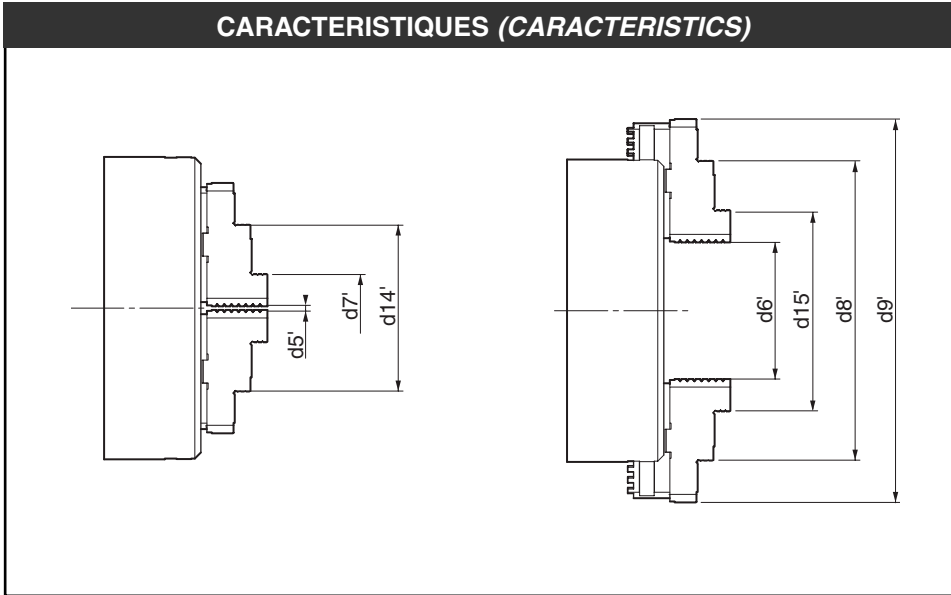


| mm            | Ø 80 | Ø 100 | Ø 125 | Ø 160 | Ø 200 | Ø 215 | Ø 250 | Ø 315 | Ø 350 | Ø 400 | Ø 500 | Ø 630 |
|---------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>d9/d13</b> | 100  | 128   | 159   | 200   | 253   | 268   | 315   | 393   | 437   | 487   | 608   | 750   |
| <b>d5</b>     | 1    | 2     | 2     | 3     | 4     | 4     | 5     | 10    | 10    | 12    | 20    | 20    |
| <b>d7</b>     | 25   | 28    | 36    | 43    | 54    | 54    | 65    | 86    | 86    | 88    | 120   | 120   |
| <b>d14</b>    | 43   | 58    | 70    | 83    | 114   | 114   | 133   | 166   | 178   | 180   | 232   | 250   |
| <b>d6</b>     | 40   | 42    | 57    | 78    | 93    | 108   | 119   | 157   | 177   | 227   | 284   | 390   |
| <b>d15</b>    | 64   | 68    | 91    | 118   | 143   | 158   | 179   | 233   | 253   | 303   | 384   | 490   |
| <b>d8</b>     | 82   | 98    | 125   | 158   | 203   | 218   | 247   | 313   | 345   | 395   | 496   | 620   |
| <b>d10</b>    | 1    | 2     | 2     | 3     | 4     | 4     | 5     | 10    | 10    | 12    | 20    | 20    |
| <b>d11</b>    | 19   | 32    | 36    | 45    | 60    | 60    | 73    | 86    | 102   | 104   | 132   | 150   |
| <b>d16</b>    | 37   | 62    | 70    | 85    | 116   | 116   | 141   | 166   | 194   | 196   | 244   | 280   |
| <b>d17</b>    | 58   | 72    | 91    | 120   | 149   | 164   | 187   | 233   | 269   | 319   | 396   | 520   |
| <b>d12</b>    | 76   | 102   | 125   | 160   | 205   | 220   | 255   | 313   | 361   | 411   | 508   | 650   |

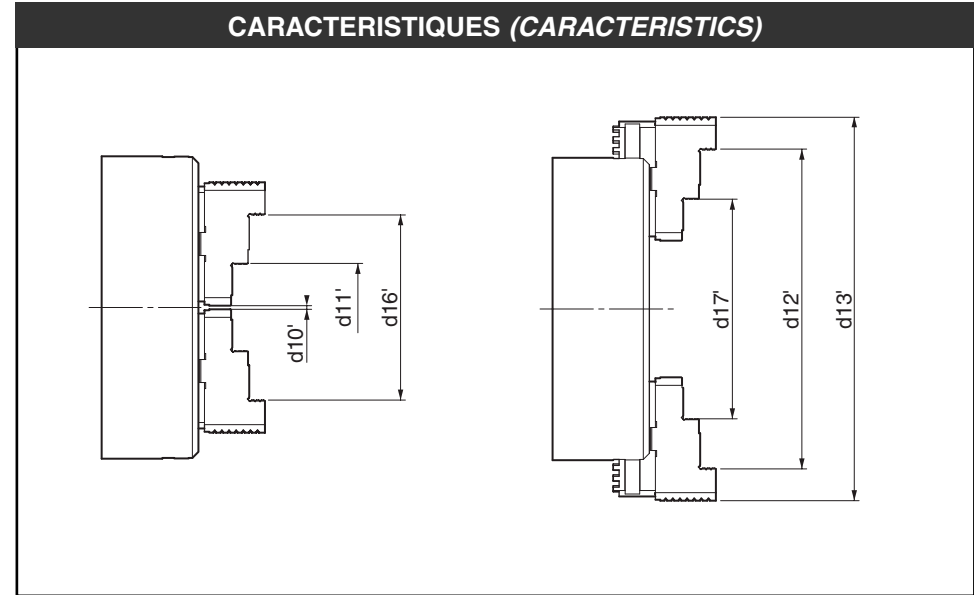
# CAPACITE DE SERRAGE DES MANDRINS A SERRAGE CONCENTRIQUE EN MORS REVERSIBLE ISO

Ø CAPACITY TO TIGHT WITH REVERSIBLE ISO JAWS

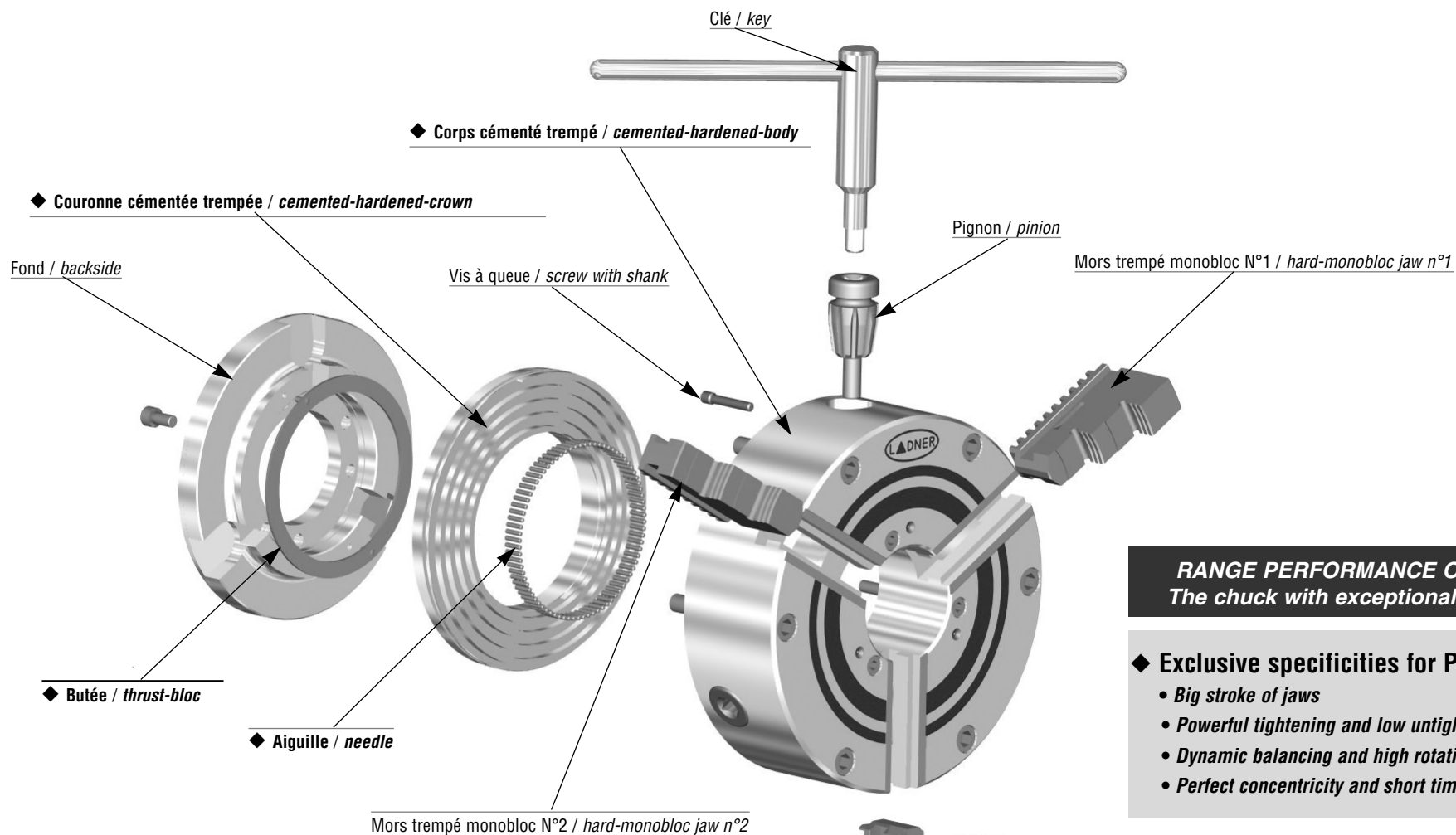
CARACTERISTIQUES (CHARACTERISTICS)



CARACTERISTIQUES (CHARACTERISTICS)



| mm      | Ø 80 | Ø 100 | Ø 125 | Ø 160 | Ø 200 | Ø 215 | Ø 250 | Ø 315 | Ø 350 | Ø 400 | Ø 500 | Ø 630 |
|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d9'd13' | -    | -     | 160   | 204   | 259   | 274   | 318   | 394   | 443   | 493   | 593   | 723   |
| d5'     | -    | -     | 3     | 3     | 4     | 4     | 8     | 15    | 20    | 20    | 40    | 80    |
| d7'     | -    | -     | 35    | 40    | 48    | 48    | 60    | 79    | 120   | 120   | 146   | 186   |
| d14'    | -    | -     | 69    | 88    | 112   | 112   | 140   | 167   | 200   | 200   | 218   | 258   |
| d6'     | -    | -     | 56    | 71    | 83    | 98    | 114   | 158   | 165   | 215   | 313   | 443   |
| d15'    | -    | -     | 88    | 108   | 127   | 142   | 166   | 222   | 265   | 315   | 419   | 549   |
| d8'     | -    | -     | 122   | 156   | 191   | 206   | 246   | 310   | 345   | 395   | 491   | 621   |
| d10'    | -    | -     | 3     | 3     | 4     | 4     | 8     | 15    | 20    | 20    | 40    | 80    |
| d11'    | -    | -     | 41    | 51    | 72    | 72    | 80    | 99    | 118   | 118   | 142   | 182   |
| d16'    | -    | -     | 75    | 99    | 136   | 136   | 160   | 187   | 198   | 198   | 214   | 254   |
| d17'    | -    | -     | 94    | 119   | 151   | 166   | 186   | 242   | 263   | 313   | 415   | 545   |
| d12'    | -    | -     | 128   | 167   | 215   | 230   | 266   | 330   | 343   | 393   | 487   | 617   |



**RANGE PERFORMANCE OF LADNER :**  
*The chuck with exceptional performance*

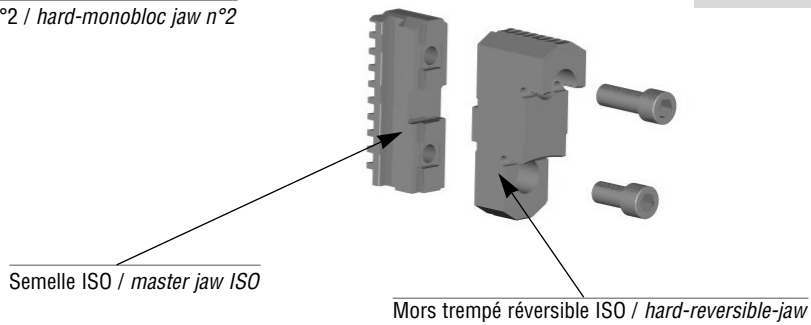
◆ **Exclusive specificities for PRECILAD® chuck**

- Big stroke of jaws
- Powerful tightening and low untightening
- Dynamic balancing and high rotation speed
- Perfect concentricity and short time to tool the jaws

**GAMME PERFORMANCE DE LADNER :**  
**Le mandrin aux performances exceptionnelles**

◆ **Spécificités exclusives du mandrin PRECILAD®**

- Grande course de mors
- Serrage puissant et faible desserage
- Equilibrage dynamique et grande vitesse de rotation
- Grande concentricité et mors rapidement réusinables

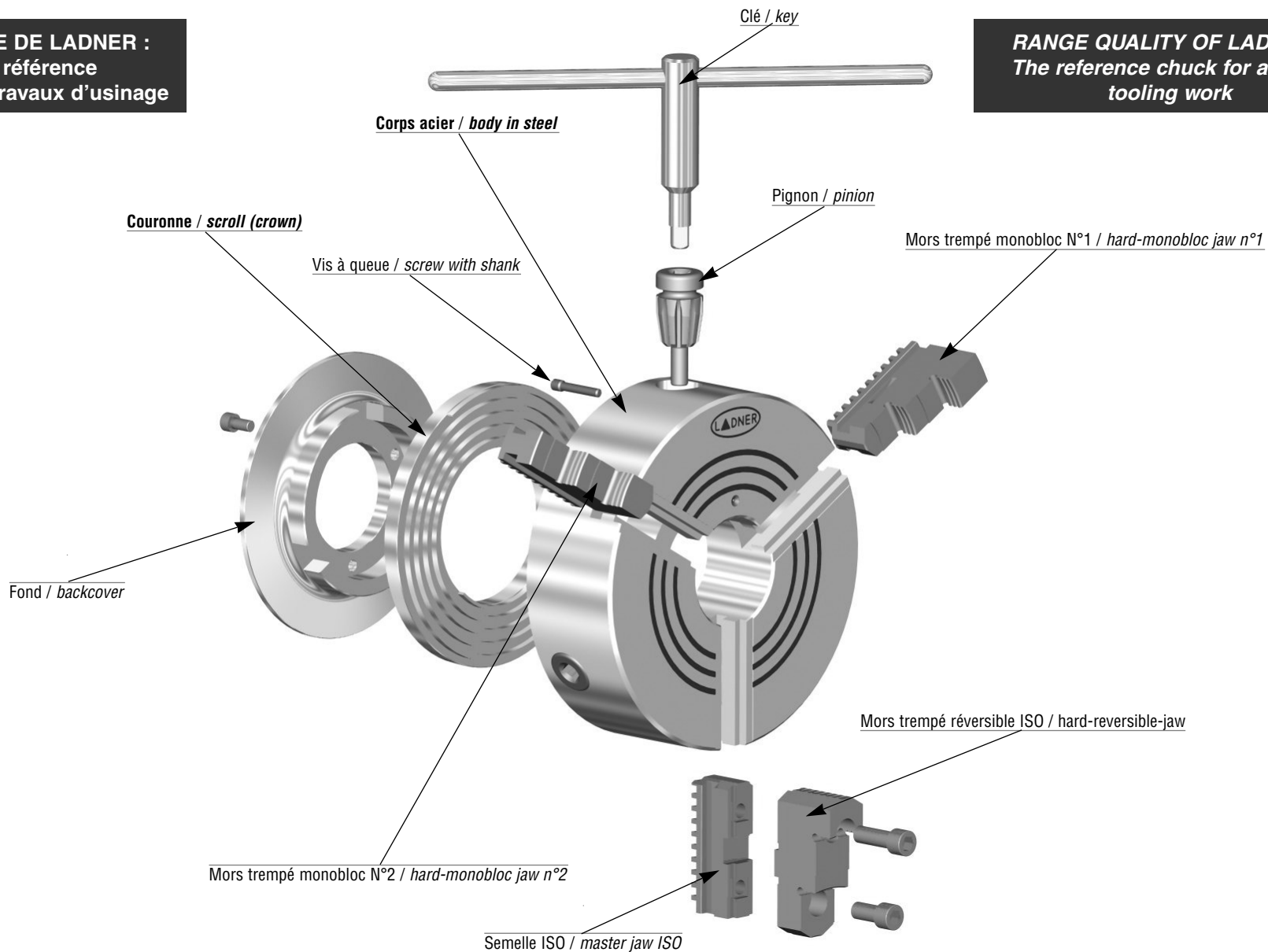


# MANDRIN A SERRAGE CONCENTRIQUE / VUE ECLATEE

## CONCENTRIC CHUCKS / EXPLODED VIEW

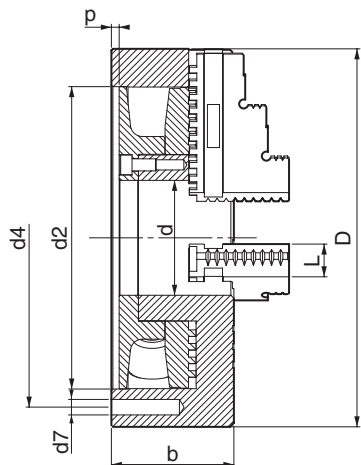
**GAMME QUALITE DE LADNER :**  
Le mandrin référence  
pour tout type de travaux d'usinage

**RANGE QUALITY OF LADNER :**  
The reference chuck for all type  
tooling work





### Mandrin standard 3 mors

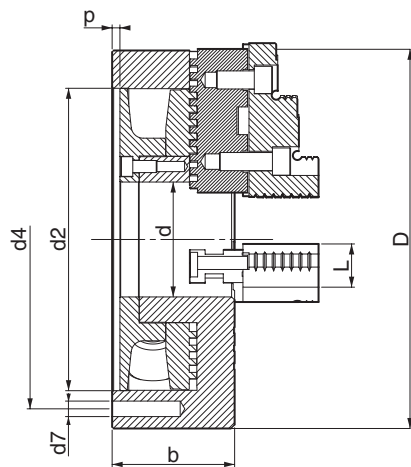


Mors n°2

Equipé de mors durs monoblocs



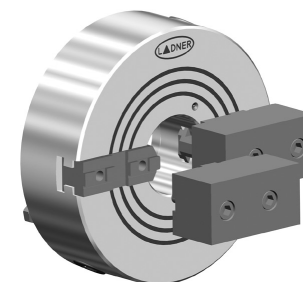
Mors n°1



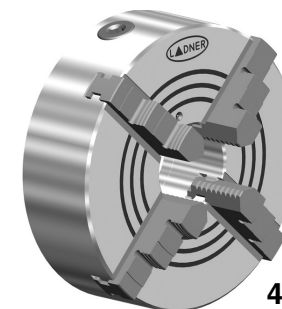
Equipé de semelles et de mors durs réversibles ISO

### Mandrin 2, 4, ou 6 mors

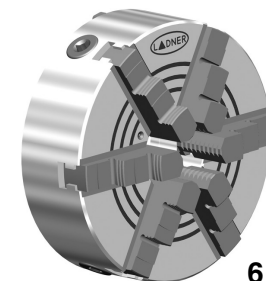
Equipé de mors durs monoblocs ou de mors durs réversibles ISO



N'existe qu'en 2 mors doux ISO



4 mors



6 mors

# MANDRINS ACIER A SERRAGE CONCENTRIQUE / concentric-chucks, body in steel

DIN 6351

MONTAGE SUR CONTRE-PLATEAU / adapted on spindle nose with flange

| Ø MANDRINS (chucks)  | D            | 80   | 100  | 125  | 160   | 200   | 250   | 315   | 350   | 400   | 500   | 630   |
|--|--------------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Epaisseur mandrin (thickness-chuck) . . . . .              | <b>b</b>     | 44,0 | 48,5 | 56,0 | 64,5  | 74,5  | 81,0  | 93,0  | 102,5 | 106,0 | 110,0 | 132,0 |
| Largeur mors (width-jaw) . . . . .                         | <b>L</b>     | 12   | 14   | 18   | 20    | 23    | 25    | 33    | 37    | 37    | 48    | 48    |
| Passage de barre (internal-passage-Ø) . . . . .            | <b>d</b>     | 16,0 | 22,0 | 32,0 | 40,5  | 55,0  | 76,0  | 100,0 | 110,0 | 130,0 | 190,0 | 240,0 |
| Profondeur centrage (depth-concentric centering) . . . . . | <b>p</b>     | 3,0  | 3,5  | 4,0  | 4,0   | 4,0   | 5,0   | 5,0   | 6,0   | 6,0   | 6,5   | 7,0   |
| Concentricité en mm (concentric-fault mm) . . . . .        |              | 0,04 | 0,04 | 0,04 | 0,04  | 0,05  | 0,05  | 0,06  | 0,06  | 0,06  | 0,07  | 0,07  |
| Centrage cylindrique (cylindrical-centering) . . . . .     | <b>d2/H6</b> | 56   | 70   | 95   | 125   | 160   | 200   | 260   | 290   | 330   | 420   | 545   |
| Ø Fixation (fixing-Ø) . . . . .                            | <b>d4</b>    | 67   | 83   | 108  | 140   | 176   | 224   | 286   | 320   | 362   | 458   | 586   |
| Vis H (screws H) . . . . .                                 | <b>d7</b>    | 3*M6 | 3*M8 | 3*M8 | 3*M10 | 3*M10 | 3*M12 | 6*M12 | 3*M14 | 6*M16 | 6*M16 | 6*M16 |

| Mandrin équipé de (chuck equipped with)      |   | D  | 80            | 100           | 125           | 160           | 200           | 250           | 315           | 350           | 400           | 500           | 630           |               |
|--|---|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|  |   |  |               |               |               |               |               |               |               |               |               |               |               |               |
| MORS MONOBLOCS<br>(monobloc-jaws equipment)  | ► 3 mors durs Mono (3 monobloc-hard-jaws)               | Réf.   | 010007EQ13E00 | 010011EQ13E00 | 010016EQ13E00 | 010023EQ13E00 | 010031EQ13E00 | 010041EQ13E00 | 010054EQ13E00 | 010061EQ13E00 | 010071EQ13E00 | 010073EQ13E00 | 010075EQ13E00 |               |
|  | Poids mandrin (weight)                                  | kg   | 1,4           | 2,0           | 4,2           | 7,0           | 13,5          | 24,0          | 42,5          | 56,0          | 76,0          | 125,0         | 232,0         |               |
|  | Vitesse maxi (maxi-speed)                               | tr/mn  | 7900          | 6300          | 5050          | 3950          | 3150          | 2500          | 2000          | 1800          | 1500          | 1250          | 1000          |               |
|  | 4 mors durs Mono (4 monobloc-hard-jaws)                 | Réf.   | -             | 010011EQ14E00 | 010016EQ14E00 | 010023EQ14E00 | 010031EQ14E00 | 010041EQ14E00 | 010054EQ14E00 | -             | 010071EQ14E00 | 010073EQ14E00 | 010075EQ14E00 |               |
|  | Poids mandrin (weight)                                  | kg   | -             | 2,3           | 4,7           | 7,5           | 14,0          | 24,8          | 43,3          | -             | 77,5          | 127,0         | 234,0         |               |
|  | Vitesse maxi (maxi-speed)                               | tr/mn  | -             | 5500          | 4400          | 3400          | 2700          | 2200          | 1700          | -             | 1300          | 1100          | 900           |               |
|  | 6 mors durs Mono (6 monobloc-hard-jaws)                 | Réf.   | -             | 010011EQ16E00 | 010016EQ16E00 | 010023EQ16E00 | 010031EQ16E00 | 010041EQ16E00 | 010054EQ16E00 | -             | 010071EQ16E00 | 010073EQ16E00 | 010075EQ16E00 |               |
|  | Poids mandrin (weight)                                  | kg   | -             | 2,5           | 5,1           | 8,1           | 14,6          | 25,6          | 45,0          | -             | 80,0          | 132,0         | 242,0         |               |
|  | Vitesse maxi (maxi-speed)                               | tr/mn  | -             | 4500          | 3600          | 2800          | 2200          | 1800          | 1400          | -             | 1100          | 900           | 700           |               |
|  | MORS REVERSIBLES ISO<br>(reversible-ISO-jaws equipment) | ► 3 mors durs ISO (3 reversible-hard-ISO-jaws) | Réf.          | -             | -             | 010016EQ43E00 | 010023EQ43E00 | 010031EQ43E00 | 010041EQ43E00 | 010054EQ43E00 | 010061EQ43E00 | 010071EQ43E00 | 010073EQ43E00 | 010075EQ43E00 |
|  |   | Poids mandrin (weight)                         | kg            | -             | -             | 5,0           | 7,5           | 14,3          | 25,0          | 43,4          | 59,0          | 79,0          | 127,5         | 232,0         |
|  |   | Vitesse maxi (maxi-speed)                      | tr/mn         | -             | -             | 5050          | 3950          | 3150          | 2500          | 2000          | 1800          | 1500          | 1300          | 1000          |
| 2 mors doux ISO (2 reversible-soft-ISO-jaws) |   | Réf.   | -             | -             | 010016EQ42E00 | 010023EQ42E00 | 010031EQ42E00 | 010041EQ42E00 | 010054EQ42E00 | -             | 010071EQ42E00 | 010073EQ42E00 | 010075EQ42E00 |               |
| Poids mandrin (weight)                       |   | kg   | -             | -             | 5,0           | 7,5           | 14,3          | 25,0          | 43,4          | -             | 79,0          | 127,5         | 232,0         |               |
| Vitesse maxi (maxi-speed)                    |   | tr/mn  | -             | -             | 5000          | 4000          | 3200          | 2500          | 2000          | -             | 1500          | 1300          | 1000          |               |
| 4 mors durs ISO (4 reversible-hard-ISO-jaws) |   | Réf.   | -             | -             | 010016EQ44E00 | 010023EQ44E00 | 010031EQ44E00 | 010041EQ44E00 | 010054EQ44E00 | -             | 010071EQ44E00 | 010073EQ44E00 | 010075EQ44E00 |               |
| Poids mandrin (weight)                       |   | kg   | -             | -             | 5,3           | 8,0           | 14,8          | 26,0          | 44,0          | -             | 82,0          | 131,5         | 236,0         |               |
| Vitesse maxi (maxi-speed)                    |   | tr/mn  | -             | -             | 4400          | 3400          | 2700          | 2200          | 1700          | -             | 1300          | 1100          | 900           |               |
| 6 mors durs ISO (6 reversible-hard-ISO-jaws) |   | Réf.   | -             | -             | 010016EQ46E00 | 010023EQ46E00 | 010031EQ46E00 | 010041EQ46E00 | 010054EQ46E00 | -             | 010071EQ46E00 | 010073EQ46E00 | 010075EQ46E00 |               |
| Poids mandrin (weight)                       |   | kg   | -             | -             | 5,8           | 8,9           | 16,7          | 28,2          | 48,8          | -             | 88,0          | 144,6         | 244,0         |               |
| Vitesse maxi (maxi-speed)                    |   | tr/mn  | -             | -             | 3600          | 2800          | 2200          | 1800          | 1400          | -             | 1100          | 900           | 700           |               |

► Réf. standard en stock (standard ref. in stock)

\* Consulter pour demande spéciale ou pour d'autres équipements en mors rapportés (\* Call Ladner for special manufacturing and other jaws equipments)



### Mandrin standard 3 mors

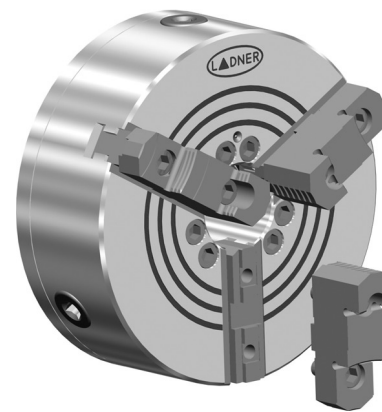
Equipé de mors durs monoblocs



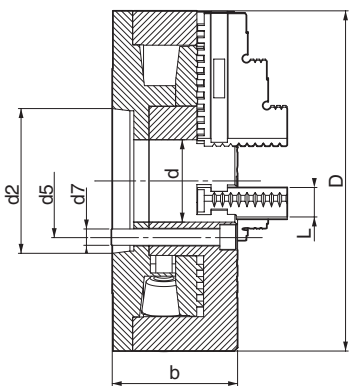
Mors n°2



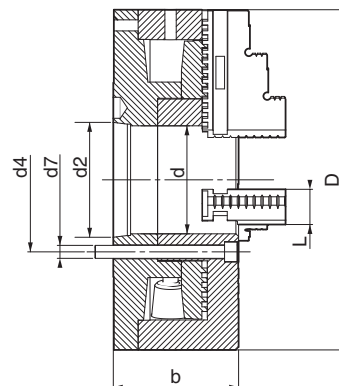
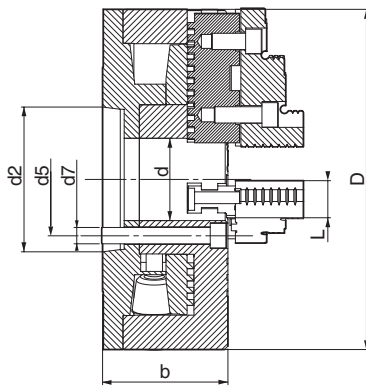
Mors n°1



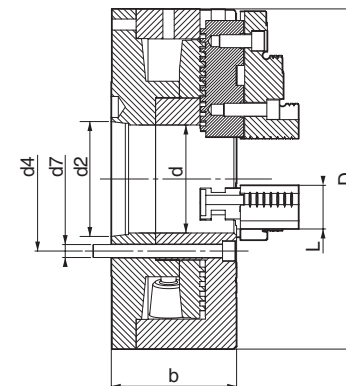
Equipé de semelles et de mors durs réversibles ISO



Fixation A1



Fixation A2



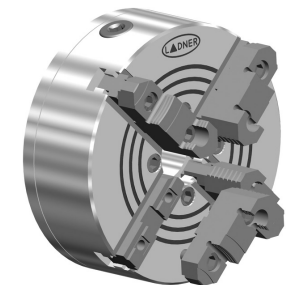
### Mandrin 4 mors



mors n°2 monoblocs



mors n°1 monoblocs



mors réversibles ISO

# MANDRINS ACIER A SERRAGE CONCENTRIQUE / concentric-chucks, body in steel

DIN 55026

MONTAGE DIRECT SUR BROCHE A1-A2 / direct assembly on spindle nose A1-A2

| BROCHE (spindle nose)                               | 4" | 5"    | 4"    | 5"    | 6"    | 6"     | 8"     | 6"     | 8"     | 6"     | 8"     | 11"    | 8"     | 11"    | 8"     | 11"    | 15"    |        |
|---|----|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Ø MANDRINS (Ø chucks)                               | D  | 160   | 160   | 200   | 200   | 215    | 250    | 250    | 315    | 315    | 400    | 400    | 400    | 500    | 500    | 630    | 630    | 630    |
| Épaisseur mandrin (thickness-chuck) . . . . .       | b  | 75,0  | 75,0  | 83,0  | 83,0  | 85,0   | 92,0   | 92,0   | 116,0  | 116,0  | 129,0  | 129,0  | 129,0  | 137,0  | 137,0  | 164,0  | 164,0  | 164,0  |
| Largeur mors (width-jaw) . . . . .                  | L  | 20    | 20    | 23    | 23    | 23     | 25     | 25     | 33     | 33     | 37     | 37     | 37     | 48     | 48     | 48     | 48     | 48     |
| Passage de barre (internal-passage-Ø) . . . . .     | d  | 32,0  | 40,5  | 55,0  | 40,5  | 60,5   | 60,5   | 76,0   | 100,0  | 80,0   | 100,0  | 130,0  | 130,0  | 190,0  | 130,0  | 190,0  | 190,0  | 190,0  |
| Concentricité en mm (concentric-fault mm) . . . . . |    | 0,04  | 0,04  | 0,05  | 0,05  | 0,05   | 0,05   | 0,05   | 0,06   | 0,06   | 0,06   | 0,06   | 0,06   | 0,07   | 0,07   | 0,075  | 0,075  | 0,075  |
| Centrage conique (conical-centering) . . . . .      | d2 | 63,52 | 82,57 | 63,52 | 82,57 | 106,38 | 106,38 | 139,72 | 106,38 | 139,72 | 106,38 | 139,72 | 196,88 | 139,72 | 196,87 | 139,72 | 196,87 | 285,80 |
| Ø Fixation A2 (fixing A2-Ø) . . . . .               | d4 | -     | -     | 82,6  | -     | -      | -      | -      | 133,4  | -      | 133,4  | 171,4  | -      | 171,4  | 235    | 171,4  | 235    | -      |
| Ø Fixation A1 (fixing A1-Ø) . . . . .               | d5 | 47,6  | 61,9  | -     | 61,9  | 82,6   | 82,6   | 111,1  | -      | 111,1  | -      | -      | 165,1  | -      | -      | -      | -      | 247,6  |
| Passage vis fixation (passage for screws) . . . . . | d7 | 3*M9  | 3*M10 | 3*M10 | 3*M10 | 3*M12  | 6*M12  | 3*M16  | 6*M12  | 6*M16  | 6*M12  | 6*M16  | 6*M18  | 6*M16  | 6*M18  | 6*M16  | 6*M18  | 6*M22  |
|   |    |       |       |       |       |        |        |        |        |        |        |        | 6*M20  | 6*M20  |        | 6*M20  | 6*M24  | 6*M24  |

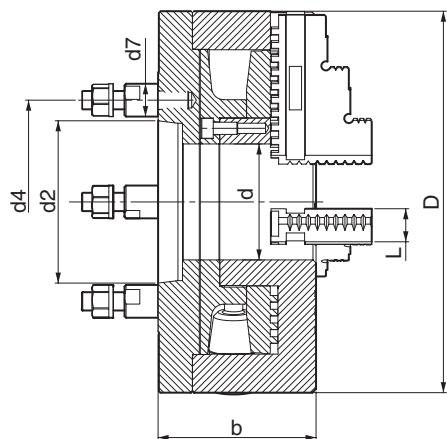
| Mandrin équipé de (chuck equipped with) | MORS MONOBLOCS<br>(monobloc-jaws equipment)    | D   | 160 / 4"      | 160 / 5"      | 200 / 4"      | 200 / 5"      | 215 / 6"      | 250 / 6"      | 250 / 8"      | 315 / 6"      | 315 / 8"      |
|---|--|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|   |  | ➤ 3 mors durs Mono (3 monobloc-hard-jaws) | Réf.          | 010023AB13E00 | 010023AC13E00 | 010031BB13E00 | 010031AC13E00 | 010034AD13E00 | 010041AD13E00 | 010041AE13E00 | 010054BD13E00 |
|   | Poids mandrin (weight)                         | kg  | 8,5           | 8,0           | 14,0          | 14,5          | 18,0          | 28,0          | 28,0          | 53,7          | 54,0          |
|   | Vitesse maxi (maxi-speed)                      | tr/mn                                     | 3950          | 3950          | 3150          | 3150          | 2900          | 2500          | 2500          | 2000          | 2000          |
|   | 4 mors durs Mono (4 monobloc-hard-jaws)        | Réf.                                      | -             | -             | -             | 010031AC14E00 | -             | 010041AD14E00 | -             | 010054BD14E00 | 010054AE14E00 |
|   | Poids mandrin (weight)                         | kg  | -             | -             | -             | 15,0          | -             | 28,8          | -             | 55,2          | 55,5          |
|   | Vitesse maxi (maxi-speed)                      | tr/mn                                     | -             | -             | -             | 2700          | -             | 2200          | -             | 1700          | 1700          |
|   |  | D   | 400 / 6"      | 400 / 8"      | 400 / 11"     | 500 / 8"      | 500 / 11"     | 630 / 8"      | 630 / 11"     | 630 / 15"     |               |
|   | ➤ 3 mors durs Mono (3 monobloc-hard-jaws)      | Réf.                                      | 010071BD13E00 | 010071BE13E00 | 010071AF13E00 | 010073BE13E00 | 010073BF13E00 | 010075BE13E00 | 010075BF13E00 | 010075AG13E00 |               |
|   | Poids mandrin (weight)                         | kg  | 88,0          | 86,0          | 85,0          | 156,0         | 154,0         | 301,3         | 301,3         | 299,3         |               |
|   | Vitesse maxi (maxi-speed)                      | tr/mn                                     | 1500          | 1500          | 1500          | 1250          | 1250          | 1000          | 1000          | 1000          |               |
|   | 4 mors durs Mono (4 monobloc-hard-jaws)        | Réf.                                      | -             | -             | -             | -             | -             | -             | -             | -             |               |
|   | Poids mandrin (weight)                         | kg  | -             | -             | -             | -             | -             | -             | -             | -             |               |
|   | Vitesse maxi (maxi-speed)                      | tr/mn                                     | -             | -             | -             | -             | -             | -             | -             | -             |               |
|   |  | D   | 160 / 4"      | 160 / 5"      | 200 / 4"      | 200 / 5"      | 215 / 6"      | 250 / 6"      | 250 / 8"      | 315 / 6"      | 315 / 8"      |
|   | ➤ 3 mors durs ISO (3 reversible-hard-ISO-jaws) | Réf.                                      | 010023AB43E00 | 010023AC43E00 | 010031BB43E00 | 010031AC43E00 | 010034AD43E00 | 010041AD43E00 | 010041AE43E00 | 010054BD43E00 | 010054AE43E00 |
|   | Poids mandrin (weight)                         | kg  | 9,0           | 8,5           | 14,9          | 15,4          | 18,9          | 28,7          | 28,7          | 54,8          | 55,1          |
|   | Vitesse maxi (maxi-speed)                      | tr/mn                                     | 3200          | 3200          | 2550          | 2550          | 2350          | 2050          | 2050          | 1800          | 1800          |
|   | 4 mors durs ISO (4 reversible-hard-ISO-jaws)   | Réf.                                      | -             | -             | -             | 010031AC44E00 | -             | 010041AD44E00 | -             | 010054BD44E00 | 010054AE44E00 |
|   | Poids mandrin (weight)                         | kg  | -             | -             | -             | 16,2          | -             | 29,8          | -             | 56,7          | 57,0          |
|   | Vitesse maxi (maxi-speed)                      | tr/mn                                     | -             | -             | -             | 2225          | -             | 1785          | -             | 1540          | 1540          |
|   |  | D   | 400 / 6"      | 400 / 8"      | 400 / 11"     | 500 / 8"      | 500 / 11"     | 630 / 8"      | 630 / 11"     | 630 / 15"     |               |
|   | ➤ 3 mors durs ISO (3 reversible-hard-ISO-jaws) | Réf.                                      | 010071BD43E00 | 010071BE43E00 | 010071AF43E00 | 010073BE43E00 | 010073BF43E00 | 010075BE43E00 | 010075BF43E00 | -             |               |
|   | Poids mandrin (weight)                         | kg  | 91,1          | 89,1          | 88,1          | 157,9         | 155,9         | 303,0         | 303,0         | -             |               |
|   | Vitesse maxi (maxi-speed)                      | tr/mn                                     | 1250          | 1250          | 1250          | 1150          | 1150          | 900           | 900           | -             |               |
|   | 4 mors durs ISO (4 reversible-hard-ISO-jaws)   | Réf.                                      | -             | -             | -             | -             | -             | -             | -             | -             |               |
|   | Poids mandrin (weight)                         | kg  | -             | -             | -             | -             | -             | -             | -             | -             |               |
|   | Vitesse maxi (maxi-speed)                      | tr/mn                                     | -             | -             | -             | -             | -             | -             | -             | -             |               |

➤ Réf. standard en stock (standard ref. in stock)

\* Consulter pour demande spéciale ou pour d'autres équipements en mors rapportés (\* Call Ladner for special manufacturing and other jaws equipments)



### Mandrin standard 3 mors



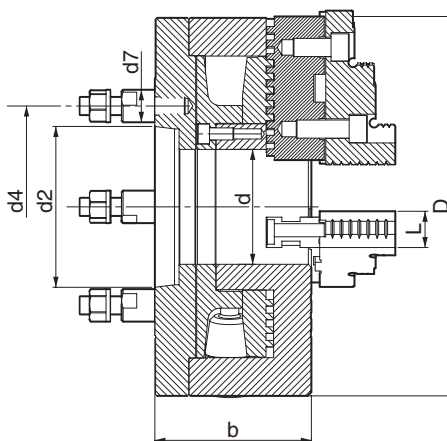
Equipé de mors durs monoblocs



Mors n°2



Mors n°1



Equipé de semelles et de mors durs réversibles ISO



### Mandrin 4 mors



mors n°2 monoblocs



mors n°1 monoblocs



mors réversibles ISO

# MANDRINS ACIER A SERRAGE CONCENTRIQUE / concentric-chucks, body in steel

DIN 55027

MONTAGE DIRECT SUR BROCHE A BAIONNETTES / direct assembly on spindle nose bayonets

| BROCHE (spindle nose)                               | 4" | 5"     | 5"     | 6"     | 6"     | 8"     | 6"     | 8"     | 11"    | 8"     | 11"    | 8"     | 11"    | 11"    | 15"    |        |
|---|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Ø MANDRINS (Ø chucks)                               | D  | 160    | 160    | 200    | 215    | 250    | 250    | 315    | 315    | 315    | 400    | 400    | 500    | 500    | 630    | 630    |
| Épaisseur mandrin (thickness-chuck) . . . . .       | b  | 78,5   | 80,0   | 82,0   | 85,0   | 106,0  | 106,0  | 115,0  | 115,0  | 115,0  | 128,0  | 145,0  | 137,0  | 137,0  | 162,0  | 162,0  |
| Largeur mors (width-jaw) . . . . .                  | L  | 20,0   | 20,0   | 23,0   | 23,0   | 25,0   | 25,0   | 33,0   | 33,0   | 33,0   | 37,0   | 37,0   | 48,0   | 48,0   | 48,0   | 48,0   |
| Passage de barre (internal-passage-Ø) . . . . .     | d  | 40,5   | 40,5   | 55,0   | 60,5   | 76,0   | 76,0   | 100,0  | 100,0  | 100,0  | 130,0  | 130,0  | 130,0  | 190,0  | 190,0  | 240,0  |
| Concentricité en mm (concentric-fault mm) . . . . . |    | 0,04   | 0,04   | 0,05   | 0,05   | 0,05   | 0,05   | 0,06   | 0,06   | 0,06   | 0,06   | 0,06   | 0,07   | 0,07   | 0,075  | 0,075  |
| Centrage conique (conical-centering) . . . . .      | d2 | 63,52  | 82,57  | 82,57  | 106,38 | 106,38 | 139,72 | 106,38 | 139,72 | 196,87 | 139,72 | 196,87 | 139,72 | 196,87 | 196,87 | 285,80 |
| Ø Fixation (fixing-Ø) . . . . .                     | d4 | 85,0   | 104,8  | 104,8  | 133,4  | 133,4  | 171,4  | 133,4  | 171,4  | 235,0  | 171,4  | 235,0  | 171,4  | 235,0  | 235,0  | 330,2  |
| Goujons Din (stud-bolt Din) . . . . .               | d7 | 3*19,5 | 4*19,5 | 4*19,5 | 4*21,5 | 4*21,5 | 4*27   | 4*21,5 | 4*27   | 6*34   | 4*27   | 6*34   | 4*27   | 6*34   | 6*34   | 6*41   |

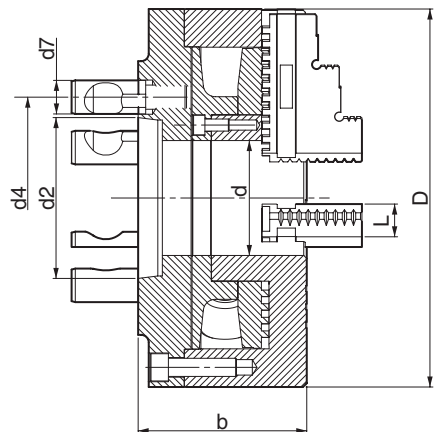
| Mandrin équipé de (chuck equipped with)        | MORS MONOBLOCS<br>(monobloc-jaws equipment) | D   | 160 / 4"      | 160 / 5"      | 200 / 5"      | 215 / 6"      | 250 / 6"      | 250 / 8"      | 315 / 6"      | 315 / 8"      | 315 / 11"     |
|--|---|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|  |   | ► 3 mors durs Mono (3 monobloc-hard-jaws) | Réf.          | 010023DB13E00 | 010023DC13E00 | 010031DC13E00 | 010034DD13E00 | 010041DD13E00 | 010041DE13E00 | 010054DD13E00 | 010054DE13E00 |
| Poids mandrin (weight)                         | kg  | 8,5                                       | 8,0           | 14,5          | 18,0          | 28,0          | 28,0          | 53,7          | 54,0          | 54,0          |               |
| Vitesse maxi (maxi-speed)                      | tr/mn                                       | 3950                                      | 3950          | 3150          | 2900          | 2500          | 2500          | 2000          | 2000          | 2000          |               |
| 4 mors durs Mono (4 monobloc-hard-jaws)        | Réf.  | 010023DB14E00                             | 010023DC14E00 | 010031DC14E00 | -             | 010041DD14E00 | 010041DE14E00 | 010054DD14E00 | 010054DE14E00 | 010054DF14E00 |               |
| Poids mandrin (weight)                         | kg  | 8,8                                       | 8,3           | 15,0          | -             | 28,8          | 28,8          | 55,2          | 55,5          | 55,5          |               |
| Vitesse maxi (maxi-speed)                      | tr/mn                                       | 3400                                      | 3400          | 2700          | -             | 2200          | 2200          | 1700          | 1700          | 1700          |               |
|  |   | D   | 400 / 8"      | 400 / 11"     | 500 / 8"      | 500 / 11"     | 630 / 11"     | 630 / 15"     |               |               |               |
| ► 3 mors durs Mono (3 monobloc-hard-jaws)      | Réf.  | 010071DE13E00                             | 010071DF13E00 | 010073DE13E00 | 010073DF13E00 | 010075DF13E00 | 010075DG13E00 |               |               |               |               |
| Poids mandrin (weight)                         | kg  | 86,0                                      | 85,0          | 156,0         | 154,0         | 301,3         | 299,3         |               |               |               |               |
| Vitesse maxi (maxi-speed)                      | tr/mn                                       | 1500                                      | 1500          | 1250          | 1250          | 1000          | 1000          |               |               |               |               |
| 4 mors durs Mono (4 monobloc-hard-jaws)        | Réf.  | 010071DE14E00                             | 010071DF14E00 | 010073DE14E00 | 010073DF14E00 | 010075DF14E00 | 010075DG14E00 |               |               |               |               |
| Poids mandrin (weight)                         | kg  | 88,0                                      | 87,0          | 159,5         | 157,5         | 306,3         | 304,3         |               |               |               |               |
| Vitesse maxi (maxi-speed)                      | tr/mn                                       | 1300                                      | 1300          | 1100          | 1100          | 900           | 900           |               |               |               |               |
|  |   | D   | 160 / 4"      | 160 / 5"      | 200 / 5"      | 215 / 6"      | 250 / 6"      | 250 / 8"      | 315 / 6"      | 315 / 8"      | 315 / 11"     |
| ► 3 mors durs ISO (3 reversible-hard-ISO-jaws) | Réf.  | 010023DB43E00                             | 010023DC43E00 | 010031DC43E00 | 010034DD43E00 | 010041DD43E00 | 010041DE43E00 | 010054DD43E00 | 010054DE43E00 | 010054DF43E00 |               |
| Poids mandrin (weight)                         | kg  | 9,0                                       | 8,5           | 15,4          | 18,9          | 28,7          | 28,7          | 54,8          | 55,1          | 55,1          |               |
| Vitesse maxi (maxi-speed)                      | tr/mn                                       | 3200                                      | 3200          | 2550          | 2350          | 2050          | 2050          | 1800          | 1800          | 1800          |               |
| 4 mors durs ISO (4 reversible-hard-ISO-jaws)   | Réf.  | 010023DB44E00                             | 010023DC44E00 | 010031DC44E00 | -             | 010041DD44E00 | 010041DE44E00 | 010054DD44E00 | 010054DE44E00 | 010054DF44E00 |               |
| Poids mandrin (weight)                         | kg  | 9,4                                       | 8,9           | 16,2          | -             | 29,8          | 29,8          | 56,7          | 57,0          | 57,0          |               |
| Vitesse maxi (maxi-speed)                      | tr/mn                                       | 2800                                      | 2800          | 2250          | -             | 1800          | 1800          | 1550          | 1550          | 1550          |               |
|  |   | D   | 400 / 8"      | 400 / 11"     | 500 / 8"      | 500 / 11"     | 630 / 11"     | 630 / 15"     |               |               |               |
| ► 3 mors durs ISO (3 reversible-hard-ISO-jaws) | Réf.  | 010071DE43E00                             | 010071DF43E00 | 010073DE43E00 | 010073DF43E00 | 010075DF43E00 | 010075DG43E00 |               |               |               |               |
| Poids mandrin (weight)                         | kg  | 89,1                                      | 88,1          | 157,9         | 155,9         | 303,0         | 301,0         |               |               |               |               |
| Vitesse maxi (maxi-speed)                      | tr/mn                                       | 1250                                      | 12540         | 1150          | 1150          | 900           | 900           |               |               |               |               |
| 4 mors durs ISO (4 reversible-hard-ISO-jaws)   | Réf.  | 010071DE44E00                             | 010071DF44E00 | 010073DE44E00 | 010073DF44E00 | 010075DF44E00 | 010075DG44E00 |               |               |               |               |
| Poids mandrin (weight)                         | kg  | 92,2                                      | 91,2          | 162,0         | 160,0         | 308,8         | 306,8         |               |               |               |               |
| Vitesse maxi (maxi-speed)                      | tr/mn                                       | 1100                                      | 1100          | 1000          | 1000          | 800           | 800           |               |               |               |               |

► Réf. standard en stock (standard ref. in stock)

\* Consulter pour demande spéciale ou pour d'autres équipements en mors rapportés (\* Call Ladner for special manufacturing and other jaws equipments)



## Mandrin standard 3 mors



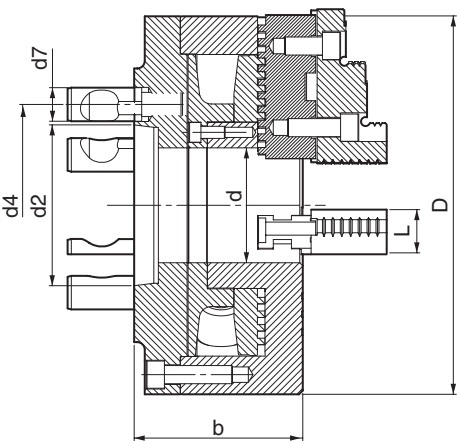
Equipé de mors durs monoblocs



Mors n°2



Mors n°1



Equipé de semelles et de mors durs réversibles ISO



## Mandrin 4 mors



mors n°2 monoblocs



mors n°1 monoblocs



mors réversibles ISO

# MANDRINS ACIER A SERRAGE CONCENTRIQUE / concentric-chucks, body in steel

DIN 55029

MONTAGE DIRECT SUR BROCHE CAMLOCK / direct assembly on spindle nose camlock

| Ø MANDRINS (chucks) / BROCHE (spindle nose) | D  | 125 / 3" | 125 / 4" | 160 / 3" | 160 / 4" | 160 / 5" | 200 / 4" | 200 / 5" | 215 / 6" | 250 / 6" | 250 / 8" |
|---|----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Epaisseur mandrin (thickness-chuck)         | b  | 67,0     | 67,0     | 78,5     | 78,5     | 83,5     | 92,0     | 92,0     | 85,0     | 106,0    | 106,0    |
| Largeur mors (width-jaw)                    | L  | 18,0     | 18,0     | 20,0     | 20,0     | 20,0     | 23,0     | 23,0     | 23,0     | 25,0     | 25,0     |
| Passage de barre (internal-passage-Ø)       | d  | 32,0     | 32,0     | 40,5     | 40,5     | 40,5     | 55,0     | 55,0     | 60,5     | 76,0     | 76,0     |
| Concentricité en mm (concentric-fault mm)   |    | 0,04     | 0,04     | 0,04     | 0,04     | 0,04     | 0,05     | 0,05     | 0,05     | 0,05     | 0,05     |
| Centrage conique (conical-centering)        | d2 | 53,98    | 63,52    | 53,98    | 63,52    | 82,57    | 63,52    | 82,57    | 106,38   | 106,38   | 139,72   |
| Ø Fixation (fixing-Ø)                       | d4 | 70,6     | 82,6     | 70,6     | 82,6     | 104,8    | 82,6     | 104,8    | 133,4    | 133,4    | 171,4    |
| Tirants camlock (tie-rod camlock)           | d7 | 3*14,3   | 3*15,8   | 3*14,3   | 3*15,8   | 6*19     | 3*15,8   | 6*19     | 6*22,2   | 6*22,2   | 6*25,4   |

| Ø MANDRINS (chucks) / BROCHE (spindle nose) | D  | 315 / 6" | 315 / 8" | 315 / 11" | 400 / 6" | 400 / 8" | 400 / 11" | 500 / 8" | 500 / 11" | 630 / 8" | 630 / 11" |
|---|----|----------|----------|-----------|----------|----------|-----------|----------|-----------|----------|-----------|
| Epaisseur mandrin (thickness-chuck)         | b  | 115,0    | 123,0    | 123,0     | 128,0    | 145,0    | 137,0     | 137,0    | 164,0     | 164,0    | 164,0     |
| Largeur mors (width-jaw)                    | L  | 33,0     | 33,0     | 33,0      | 37,0     | 37,0     | 37,0      | 48,0     | 48,0      | 48,0     | 48,0      |
| Passage de barre (internal-passage-Ø)       | d  | 100,0    | 100,0    | 100,0     | 100,0    | 130,0    | 130,0     | 130,0    | 190,0     | 130,0    | 190,0     |
| Concentricité en mm (concentric-fault mm)   |    | 0,06     | 0,06     | 0,06      | 0,06     | 0,06     | 0,06      | 0,07     | 0,07      | 0,075    | 0,075     |
| Centrage conique (conical-centering)        | d2 | 106,38   | 139,72   | 196,88    | 106,38   | 139,72   | 196,88    | 196,88   | 196,88    | 139,72   | 196,88    |
| Ø Fixation (fixing-Ø)                       | d4 | 133,4    | 171,4    | 235       | 133,4    | 171,4    | 235,0     | 171,4    | 235       | 171,4    | 235       |
| Tirants camlock (tie-rod camlock)           | d7 | 6*22,2   | 6*25,4   | 6*30,1    | 6*22,2   | 6*25,4   | 6*30,1    | 6*25,4   | 6*30,1    | 6*25,4   | 6*30,1    |

| MORS MONOBLOCS<br>(monobloc-jaws equipment) | D     |               | 125 / 3"                                  | 125 / 4"      | 160 / 3"      | 160 / 4"      | 160 / 5"      | 200 / 4"      | 200 / 5"      | 215 / 6"      | 250 / 6"      | 250 / 8"      |
|---|-------|---------------|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|   |       |               | ► 3 mors durs Mono (3 monobloc-hard-jaws) | Réf.          | 010016CA13E00 | 010016CB13E00 | 010023CA13E00 | 010023CB13E00 | 010023CC13E00 | 010031CB13E00 | 010031CC13E00 | 010034CD13E00 |
| Poids mandrin (weight)                      | kg    | 5,6           | 5,5                                       | 8,5           | 8,5           | 8,0           | 14,0          | 14,5          | 18,0          | 28,0          | 28,0          |               |
| Vitesse maxi (maxi-speed)                   | tr/mn | 5050          | 5050                                      | 3950          | 3950          | 3950          | 3150          | 3150          | 2900          | 2500          | 2500          |               |
| 4 mors durs Mono (4 monobloc-hard-jaws)     | Réf.  | 010016CA14E00 | 010016CB14E00                             | 010023CA14E00 | 010023CB14E00 | 010023CC14E00 | 010031CB14E00 | 010031CC14E00 | -             | 010041CD14E00 | 010041CE14E00 |               |
| Poids mandrin (weight)                      | kg    | 5,78          | 5,68                                      | 8,8           | 8,8           | 8,3           | 14,5          | 15,0          | -             | 28,8          | 28,8          |               |
| Vitesse maxi (maxi-speed)                   | tr/mn | 4400          | 4400                                      | 3400          | 3400          | 3400          | 2750          | 2750          | -             | 2200          | 2200          |               |
| MORS MONOBLOCS<br>(monobloc-jaws equipment) | D     |               | 315 / 6"                                  | 315 / 8"      | 315 / 11"     | 400 / 6"      | 400 / 8"      | 400 / 11"     | 500 / 8"      | 500 / 11"     | 630 / 8"      | 630 / 11"     |
|   |       |               | ► 3 mors durs Mono (3 monobloc-hard-jaws) | Réf.          | 010054CD13E00 | 010054CE13E00 | 010054CF13E00 | 010071CD13E00 | 010071CE13E00 | 010071CF13E00 | 010073CE13E00 | 010073CF13E00 |
| Poids mandrin (weight)                      | kg    | 53,7          | 54,0                                      | 70,0          | 88,0          | 86,0          | 85,0          | 156,0         | 154           | 301,3         | 301,3         |               |
| Vitesse maxi (maxi-speed)                   | tr/mn | 2000          | 2000                                      | 1550          | 1515          | 1515          | 1515          | 1260          | 1260          | 1000          | 1000          |               |
| 4 mors durs Mono (4 monobloc-hard-jaws)     | Réf.  | 010054CD14E00 | 010054CE14E00                             | 010054CF14E00 | 010071CD14E00 | 010071CE14E00 | 010071CF14E00 | 010073CE14E00 | 010073CF14E00 | 010075CE14E00 | 010075CF14E00 |               |
| Poids mandrin (weight)                      | kg    | 55,2          | 55,5                                      | 73,5          | 90,0          | 88,0          | 87,0          | 159,5         | 157,5         | 306,3         | 306,3         |               |
| Vitesse maxi (maxi-speed)                   | tr/mn | 1750          | 1750                                      | 1500          | 1300          | 1300          | 1300          | 1100          | 1100          | 850           | 850           |               |

| MANDRIN ÉQUIPÉ DE (chuck equipped with)                 | D     |               | 125 / 3"                                       | 125 / 4"      | 160 / 3"      | 160 / 4"      | 160 / 5"      | 200 / 4"      | 200 / 5"      | 215 / 6"      | 250 / 6"      | 250 / 8"      |
|---|-------|---------------|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|   |       |               | ► 3 mors durs ISO (3 reversible-hard-ISO-jaws) | Réf.          | 010016CA43E00 | 010016CB43E00 | 010023CA43E00 | 010023CB43E00 | 010023CC43E00 | 010031CB43E00 | 010031CC43E00 | 010034CD43E00 |
| Poids mandrin (weight)                                  | kg    | 5,6           | 5,5  | 8,5           | 8,5           | 8,5           | 14,5          | 15,3          | 18,8          | 28,0          | 28,0          |               |
| Vitesse maxi (maxi-speed)                               | tr/mn | 5050          | 5050   | 3950          | 3950          | 3950          | 3150          | 3150          | 2350          | 2050          | 2050          |               |
| 4 mors durs ISO (4 reversible-hard-ISO-jaws)            | Réf.  | 010016CA44E00 | 010016CB44E00                                  | 010023CA44E00 | 010023CB44E00 | 010023CC44E00 | 010031CB44E00 | 010031CC44E00 | -             | 010041CD44E00 | 010041CE44E00 |               |
| Poids mandrin (weight)                                  | kg    | 5,78          | 5,68   | 8,8           | 8,8           | 8,3           | 15,0          | 15,8          | -             | 29,1          | 29,1          |               |
| Vitesse maxi (maxi-speed)                               | tr/mn | 4350          | 4350   | 3400          | 3400          | 3400          | 2350          | 2350          | -             | 1800          | 1800          |               |
| MORS REVERSIBLES ISO<br>(reversible-ISO-jaws equipment) | D     |               | 315 / 6"                                       | 315 / 8"      | 315 / 11"     | 400 / 6"      | 400 / 8"      | 400 / 11"     | 500 / 8"      | 500 / 11"     | 630 / 8"      | 630 / 11"     |
|   |       |               | ► 3 mors durs ISO (3 reversible-hard-ISO-jaws) | Réf.          | 010054CD43E00 | 010054CE43E00 | 010054CF43E00 | 010071CD43E00 | 010071CE43E00 | 010071CF43E00 | 010073CE43E00 | 010073CF43E00 |
| Poids mandrin (weight)                                  | kg    | 54,5          | 55,0   | 72,0          | 91,0          | 89,0          | 105,0         | 158,5         | 156,5         | 306           | 304           |               |
| Vitesse maxi (maxi-speed)                               | tr/mn | 1800          | 1800   | 1350          | 1250          | 1250          | 1250          | 1150          | 1150          | 900           | 900           |               |
| 4 mors durs ISO (4 reversible-hard-ISO-jaws)            | Réf.  | 010054CD44E00 | 010054CE44E00                                  | 010054CF44E00 | 010071CD44E00 | 010071CE44E00 | 010071CF44E00 | 010073CE44E00 | 010073CF44E00 | 010075CE44E00 | 010075CF44E00 |               |
| Poids mandrin (weight)                                  | kg    | 56,3          | 56,8   | 73,8          | 94,0          | 92,0          | 108,0         | 162,6         | 160,6         | 311,8         | 309,8         |               |
| Vitesse maxi (maxi-speed)                               | tr/mn | 1550          | 1550   | 1350          | 1100          | 1100          | 1100          | 1000          | 1000          | 800           | 800           |               |

► Réf. standard en stock (standard ref. in stock)

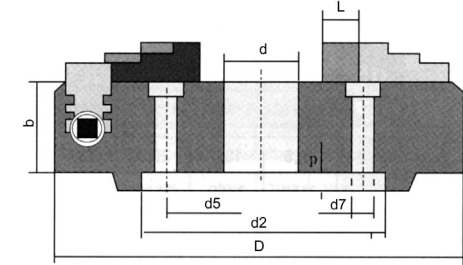
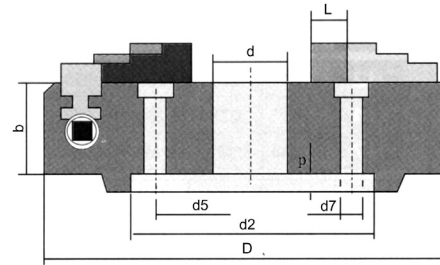
\* Consulter pour demande spéciale ou pour d'autres équipements en mors rapportés (\* Call Ladner for special manufacturing and other jaws equipments)





■ MONTAGE A CONTRE-PLATEAU / adapted on spindle nose with flange

CARACTERISTIQUES (CHARACTERISTICS)



→ Simple guidage (simple guide)

| Ø PLATEAUX (ø plates)                                      | D         | 150    | 200    | 260  | 310  | 350  | 400   | 500   | 600   | 710   | 800   |
|--|-----------|--------|--------|------|------|------|-------|-------|-------|-------|-------|
| Epaisseur plateaux (thickness plates) . . . . .            | <b>b</b>  | 56,0   | 62,0   | 67,0 | 70,0 | 78,0 | 105,0 | 105,0 | 125,0 | 135,0 | 145,0 |
| Passage de barre (internal-passag-Ø) . . . . .             | <b>d</b>  | 56,0   | 62,0   | 67,0 | 70,0 | 78,0 | 105,0 | 105,0 | 125,0 | 135,0 | 145,0 |
| Profondeur centrage (depth-concentric centering) . . . . . | <b>p</b>  | 5,0    | 5,0    | 5,0  | 5,0  | 7,0  | 18,0  | 18,0  | 18,0  | 18,0  | 18,0  |
| Centrage cylindrique (cylindrical-centering) . . . . .     | <b>d2</b> | 120,65 | 120,65 | 130  | 130  | 165  | 210   | 260   | 260   | 260   | 370   |
| Ø Fixation (fixing-Ø) . . . . .                            | <b>d5</b> | 37,5   | 41,3   | 52,4 | 52,4 | 66,7 | 87,5  | 87,5  | 110   | 110   | 165   |

| ► 4 mors durs (4 hard-jaws) | Réf. | 025021EQ84Q00 | 025031EQ84Q00 | 025043EQ84Q00 | 025053EQ84Q00 | 025061EQ84Q00 | 025071EQ84Q00 | 025073EQ84Q00 | 025075EQ84Q00 | 025077EQ84Q00 | 025079EQ84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 5,0           | 8,5           | 20,0          | 26,0          | 39            | 52            | 91            | 132           | 190           | 290           |

→ Double guidage (double guide)

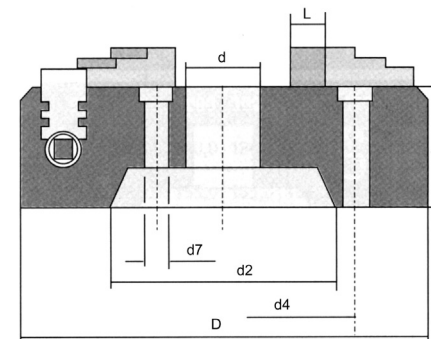
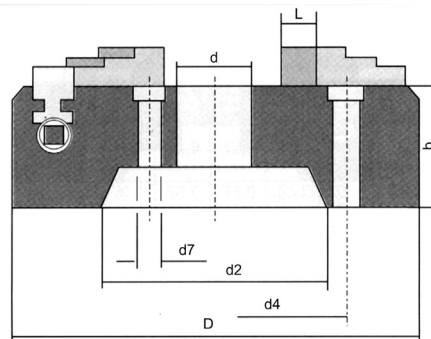
| Ø PLATEAUX (ø plates)                                      | D         | 900   | 1000  | 1200  | 1500  |
|--|-----------|-------|-------|-------|-------|
| Epaisseur plateaux (thickness plates) . . . . .            | <b>b</b>  | 150,0 | 180,0 | 180,0 | 180,0 |
| Passage de barre (internal-passag-Ø) . . . . .             | <b>d</b>  | 155,0 | 155,0 | 190,0 | 190,0 |
| Profondeur centrage (depth-concentric centering) . . . . . | <b>p</b>  | 10,0  | 10,0  | SD    | SD    |
| Centrage cylindrique (cylindrical-centering) . . . . .     | <b>d2</b> | 270   | 270   | SD    | SD    |
| Ø Fixation (fixing-Ø) . . . . .                            | <b>d5</b> | 117,5 | 117,5 | 165,1 | 165,1 |

| ► 4 mors durs (4 hard-jaws) | Réf. | 020881EQ84Q00 | 020883EQ84Q00 | 020885EQ84Q00 | 020888EQ84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 340           | 510           | 730           | 1200          |

► Réf. standard en stock (standard ref. in stock)

\* Consulter pour demande spéciale ou pour d'autres équipements en mors rapportés (\* Call Ladner for special manufacturing and other jaws equipments)

**CARACTERISTIQUES (CHARACTERISTICS)**



→ **Simple guidage (simple guide)**

| Ø PLATEAUX (plates) / BROCHE (spindle nose)         | D         | 200 / 4" | 200 / 5" | 260 / 4" | 260 / 5" | 310 / 5" | 310 / 6" | 350 / 5" | 350 / 6" | 350 / 8" | 400 / 6" |
|---|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Epaisseur plateaux (thickness-chuck) . . . . .      | <b>b</b>  | 62,0     | 62,0     | 52,0     | 67,0     | 70,0     | 70,0     | 78,0     | 78,0     | 78,0     | 95,0     |
| Passage de barre (internal-passagage-Ø) . . . . .   | <b>d</b>  | 50,0     | 50,0     | 55,0     | 55,0     | 65,0     | 65,0     | 75,0     | 75,0     | 75,0     | 80,0     |
| Centrage conique (conical-centering) . . . . .      | <b>d2</b> | 63,52    | 82,56    | 63,52    | 82,56    | 82,56    | 106,38   | 82,56    | 106,38   | 139,72   | 106,38   |
| Ø Fixation A2 (fixing A2-Ø) . . . . .               | <b>d4</b> | 82,6     | 104,8    | 82,6     | 104,8    | 104,8    | 133,4    | 104,8    | 133,4    | 171,4    | 133,4    |
| Passage vis fixation (passage for screws) . . . . . | <b>d7</b> | M10      | M10      | M10      | M10      | M10      | M12      | M10      | M12      | M16      | M12      |

| ► 4 mors durs (4 hard-jaws) | Réf. | 025031BB84Q00 | 025031BC84Q00 | 025043BB84Q00 | 025043BC84Q00 | 025053BC84Q00 | 025053BD84Q00 | 025061BC84Q00 | 025061BD84Q00 | 025061BE84Q00 | 025071BD84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 8,5           | 8,5           | 13            | 20            | 26            | 26            | 39            | 39            | 39            | 49            |

| Ø PLATEAUX (plates) / BROCHE (spindle nose)         | D         | 400 / 8" | 500 / 6" | 500 / 8" | 500 / 11" | 600 / 8" | 600 / 11" | 710 / 8" | 710 / 11" | 800 / 8" | 800 / 11" |
|---|-----------|----------|----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|
| Epaisseur plateaux (thickness-chuck) . . . . .      | <b>b</b>  | 95,0     | 115,0    | 115,0    | 115,0     | 120,0    | 120,0     | 140,0    | 140,0     | 145,0    | 145,0     |
| Passage de barre (internal-passagage-Ø) . . . . .   | <b>d</b>  | 80,0     | 90,0     | 90,0     | 90,0      | 120,0    | 120,0     | -        | -         | 155,0    | 155,0     |
| Centrage conique (conical-centering) . . . . .      | <b>d2</b> | 139,72   | 106,38   | 139,72   | 196,87    | 139,72   | 196,87    | 139,72   | 196,87    | 139,72   | 196,87    |
| Ø Fixation A2 (fixing A2-Ø) . . . . .               | <b>d4</b> | 171,4    | 133,4    | 171,4    | 235       | 171,4    | 235       | 171,4    | 235       | 171,4    | 235       |
| Passage vis fixation (passage for screws) . . . . . | <b>d7</b> | M16      | M12      | M16      | M18/M20   | M16      | M18/M20   | M16      | M18/M20   | M16      | M18/M20   |

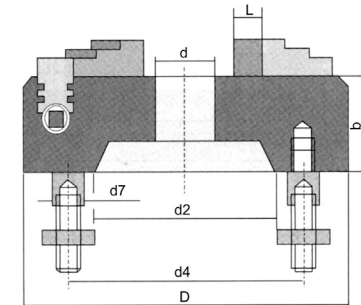
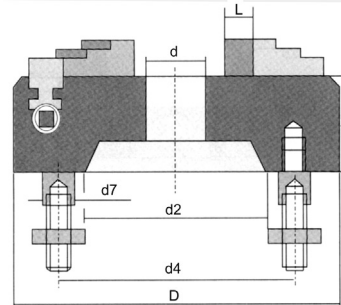
| ► 4 mors durs (4 hard-jaws) | Réf. | 025071BE84Q00 | 025073BD84Q00 | 025073BE84Q00 | 025073BF84Q00 | 025075BE84Q00 | 025075BF84Q00 | 025077BE84Q00 | 025077BF84Q00 | 025079BE84Q00 | 025079BF84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 49            | 78            | 78            | 78            | 120           | 120           | 210           | 210           | 260           | 260           |

→ **Double guidage (double guide)**

| Ø PLATEAUX (plates) / BROCHE (spindle nose)         | D         | 900 / 8" | 900 / 11" | 1000 / 11" | 1000 / 15" | 1200 / 11" | 1200 / 15" | 1500 / 11" | 1500 / 15" |
|---|-----------|----------|-----------|------------|------------|------------|------------|------------|------------|
| Epaisseur plateaux (thickness-chuck) . . . . .      | <b>b</b>  | 150,0    | 150,0     | 180,0      | 180,0      | 180,0      | 180,0      | 180,0      | 180,0      |
| Passage de barre (internal-passagage-Ø) . . . . .   | <b>d</b>  | 155,0    | 155,0     | 155,0      | 155,0      | 190,0      | 190,0      | 190,0      | 190,0      |
| Centrage conique (conical-centering) . . . . .      | <b>d2</b> | 139,72   | 196,87    | 196,87     | 285,77     | 196,87     | 285,77     | 196,87     | 285,77     |
| Ø Fixation A2 (fixing A2-Ø) . . . . .               | <b>d4</b> | 171,4    | 235,0     | 235,0      | 330,20     | 235,0      | 330,20     | 235,0      | 330,20     |
| Passage vis fixation (passage for screws) . . . . . | <b>d7</b> | M16      | M18/M20   | M18/M20    | M22        | M18/M20    | M22        | M18/M20    | M22        |

| ► 4 mors durs (4 hard-jaws) | Réf. | 020881BE84Q00 | 020881BF84Q00 | 020883BF84Q00 | 020883BG84Q00 | 020885BF84Q00 | 020885BG84Q00 | 020888BF84Q00 | 020888BG84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 340           | 340           | 510           | 510           | 650           | 650           | 1000          | 1000          |

► Réf. standard en stock (standard ref. in stock) \* Consulter pour demande spéciale ou pour d'autres équipements en mors rapportés (\* Call Ladner for special manufacturing and other jaws equipments)

**■ MONTAGE DIRECT SUR BROCHE BAÏONNETTES / direct assembly on spindle nose bayonets**
**CARACTERISTIQUES (CHARACTERISTICS)**

**→ Simple guidage (simple guide)**

| Ø PLATEAUX (plates) / BROCHE (spindle nose)     | D         | 200 / 4" | 200 / 5" | 250 / 4" | 250 / 5" | 300 / 5" | 300 / 6" | 350 / 5" | 350 / 6" | 350 / 8" | 400 / 6" |
|---|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Epaisseur plateaux (thickness-chuck) . . . . .  | <b>b</b>  | 62,0     | 62,0     | 52,0     | 67,0     | 70,0     | 70,0     | 78,0     | 78,0     | 78,0     | 95,0     |
| Passage de barre (internal-passage-Ø) . . . . . | <b>d</b>  | 50,0     | 50,0     | 55,0     | 55,0     | 65,0     | 65,0     | 75,0     | 75,0     | 75,0     | 80,0     |
| Centrage conique (conical-centering) . . . . .  | <b>d2</b> | 63,52    | 82,56    | 63,52    | 82,56    | 82,56    | 106,38   | 82,56    | 106,38   | 139,72   | 106,38   |
| Ø Fixation (fixing-Ø) . . . . .                 | <b>d4</b> | 85,0     | 104,8    | 85,0     | 104,8    | 104,8    | 133,4    | 104,8    | 133,4    | 171,4    | 133,4    |
| Goujons Din (stud-bolt Din) . . . . .           | <b>d7</b> | 3*19,5   | 4*19,5   | 3*19,5   | 4*19,5   | 4*19,5   | 4*21,5   | 4*19,5   | 4*21,5   | 4*27     | 4*21,5   |

| ► 4 mors durs (4 hard-jaws) | Réf. | 025031DB84Q00 | 025031DC84Q00 | 025041DB84Q00 | 025041DC84Q00 | 025051DC84Q00 | 025051DD84Q00 | 025061DC84Q00 | 025061DD84Q00 | 025061DE84Q00 | 025071DD84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 8,5           | 8,5           | 13            | 20            | 26            | 26            | 39            | 39            | 39            | 49            |

| Ø PLATEAUX (plates) / BROCHE (spindle nose)     | D         | 400 / 8" | 500 / 6" | 500 / 8" | 500 / 11" | 600 / 8" | 600 / 11" | 710 / 8" | 710 / 11" | 800 / 8" | 800 / 11" |
|---|-----------|----------|----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|
| Epaisseur plateaux (thickness-chuck) . . . . .  | <b>b</b>  | 95,0     | 115,0    | 115,0    | 115,0     | 120,0    | 120,0     | 140,0    | 140,0     | 145,0    | 145,0     |
| Passage de barre (internal-passage-Ø) . . . . . | <b>d</b>  | 80,0     | 90,0     | 90,0     | 90,0      | 120,0    | 120,0     | -        | -         | 155,0    | 155,0     |
| Centrage conique (conical-centering) . . . . .  | <b>d2</b> | 139,72   | 106,38   | 139,72   | 196,87    | 139,72   | 196,87    | 139,72   | 196,87    | 139,72   | 196,87    |
| Ø Fixation (fixing-Ø) . . . . .                 | <b>d4</b> | 171,4    | 133,4    | 171,4    | 235,0     | 171,4    | 235,0     | 171,4    | 235,0     | 171,4    | 235,0     |
| Goujons Din (stud-bolt Din) . . . . .           | <b>d7</b> | 4*27     | 4*21,5   | 4*27     | 6*34      | 4*27     | 6*34      | 4*27     | 6*34      | 4*27     | 6*34      |

| ► 4 mors durs (4 hard-jaws) | Réf. | 025071DE84Q00 | 025073DD84Q00 | 025073DE84Q00 | 025073DF84Q00 | 025075DE84Q00 | 025075DF84Q00 | 025077DE84Q00 | 025077DF84Q00 | 025079DE84Q00 | 025079DF84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 49            | 78            | 78            | 78            | 120           | 120           | 210           | 210           | 260           | 260           |

**→ Double guidage (double guide)**

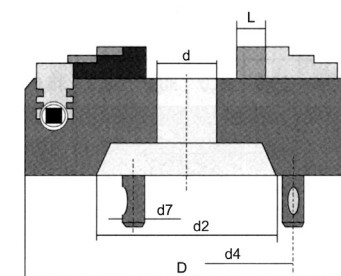
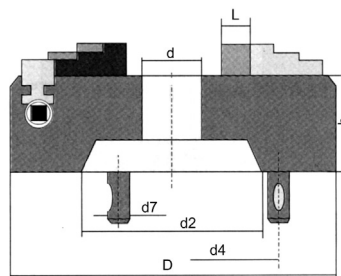
| Ø PLATEAUX (plates) / BROCHE (spindle nose)     | D         | 900 / 8" | 900 / 11" | 1000 / 11" | 1000 / 15" | 1200 / 11" | 1200 / 15" | 1500 / 11" | 1500 / 15" |
|---|-----------|----------|-----------|------------|------------|------------|------------|------------|------------|
| Epaisseur plateaux (thickness-chuck) . . . . .  | <b>b</b>  | 150,0    | 150,0     | 180,0      | 180,0      | 180,0      | 180,0      | 180,0      | 180,0      |
| Passage de barre (internal-passage-Ø) . . . . . | <b>d</b>  | 155,0    | 155,0     | 155,0      | 155,0      | 190,0      | 190,0      | 190,0      | 190,0      |
| Centrage conique (conical-centering) . . . . .  | <b>d2</b> | 139,72   | 196,87    | 196,87     | 285,78     | 196,87     | 285,78     | 196,87     | 285,78     |
| Ø Fixation (fixing-Ø) . . . . .                 | <b>d4</b> | 171,4    | 235,0     | 235,0      | 330,20     | 235,0      | 330,20     | 235,0      | 330,20     |
| Goujons Din (stud-bolt Din) . . . . .           | <b>d7</b> | 4*27     | 6*34      | 6*34       | 6*41       | 6*34       | 6*41       | 6*34       | 6*41       |

| ► 4 mors durs (4 hard-jaws) | Réf. | 020881DE84Q00 | 020881DF84Q00 | 020883DF84Q00 | 020883DG84Q00 | 020885DF84Q00 | 020885DG84Q00 | 020888DF84Q00 | 020888DG84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 340           | 340           | 510           | 510           | 650           | 650           | 1000          | 1000          |

► Réf. standard en stock (standard ref. in stock)

\* Consulter pour demande spéciale ou pour d'autres équipements en mors rapportés (\* Call Ladner for special manufacturing and other jaws equipments)

**CARACTERISTIQUES (CHARACTERISTICS)**



→ **Simple guidage (simple guide)**

| Ø PLATEAUX (plates) / BROCHE (spindle nose)     | D         | 200 / 3" | 200 / 4" | 200 / 5" | 250 / 4" | 250 / 5" | 300 / 5" | 300 / 6" | 350 / 5" | 350 / 6" | 350 / 8" | 400 / 6" |
|---|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Epaisseur plateaux (thickness-chuck) . . . . .  | <b>b</b>  | 62,0     | 62,0     | 62,0     | 52,0     | 67,0     | 70,0     | 70,0     | 78,0     | 78,0     | 78,0     | 95,0     |
| Passage de barre (internal-passage-Ø) . . . . . | <b>d</b>  | 50,0     | 50,0     | 50,0     | 55,0     | 55,0     | 65,0     | 65,0     | 75,0     | 75,0     | 75,0     | 80,0     |
| Centrage conique (conical-centering) . . . . .  | <b>d2</b> | 53,98    | 63,52    | 82,56    | 63,52    | 82,56    | 82,56    | 106,38   | 82,56    | 106,38   | 139,72   | 106,38   |
| Ø Fixation (fixing-Ø) . . . . .                 | <b>d4</b> | 70,6     | 82,6     | 104,8    | 82,6     | 104,8    | 104,8    | 133,4    | 104,8    | 133,4    | 171,4    | 133,4    |
| Tirants camlock (tie-rod camlock) . . . . .     | <b>d7</b> | 14,3     | 15,8     | 19,0     | 15,8     | 19,0     | 19,0     | 22,2     | 19,0     | 22,2     | 25,4     | 22,2     |

| ► 4 mors durs (4 hard-jaws) | Réf. | 025031CA84Q00 | 025031CB84Q00 | 025031CC84Q00 | 025041CB84Q00 | 025041CC84Q00 | 025051CC84Q00 | 025051CD84Q00 | 025061CC84Q00 | 025061CD84Q00 | 025061CE84Q00 | 025071CD84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 8,5           | 8,5           | 8,5           | 13            | 20            | 26            | 26            | 39            | 39            | 39            | 49            |

| Ø PLATEAUX (plates) / BROCHE (spindle nose)     | D         | 400 / 8" | 500 / 6" | 500 / 8" | 500 / 11" | 600 / 8" | 600 / 11" | 710 / 8" | 710 / 11" | 800 / 8" | 800 / 11" |
|---|-----------|----------|----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|
| Epaisseur plateaux (thickness-chuck) . . . . .  | <b>b</b>  | 95,0     | 115,0    | 115,0    | 115,0     | 120,0    | 120,0     | 140,0    | 140,0     | 145,0    | 145,0     |
| Passage de barre (internal-passage-Ø) . . . . . | <b>d</b>  | 80,0     | 90,0     | 90,0     | 90,0      | 120,0    | 120,0     | -        | -         | 155,0    | 155,0     |
| Centrage conique (conical-centering) . . . . .  | <b>d2</b> | 139,72   | 106,38   | 139,72   | 196,87    | 139,72   | 196,87    | 139,72   | 196,87    | 139,72   | 196,87    |
| Ø Fixation (fixing-Ø) . . . . .                 | <b>d4</b> | 171,4    | 133,4    | 171,4    | 235,0     | 171,4    | 235,0     | 171,4    | 235,0     | 171,4    | 235,0     |
| Tirants camlock (tie-rod camlock) . . . . .     | <b>d7</b> | 25,4     | 22,2     | 25,4     | 30,1      | 25,4     | 30,1      | 25,4     | 30,1      | 25,4     | 30,1      |

| ► 4 mors durs (4 hard-jaws) | Réf. | 025071CE84Q00 | 025073CD84Q00 | 025073CE84Q00 | 025073CF84Q00 | 025075CE84Q00 | 025075CF84Q00 | 025077CE84Q00 | 025077CF84Q00 | 025079CE84Q00 | 025079CF84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 49            | 78            | 78            | 78            | 120           | 120           | 210           | 210           | 260           | 260           |

→ **Double guidage (double guide)**

| Ø PLATEAUX (plates) / BROCHE (spindle nose)     | D         | 900 / 8" | 900 / 11" | 1000 / 11" | 1000 / 15" | 1200 / 11" | 1200 / 15" | 1500 / 11" | 1500 / 15" |
|---|-----------|----------|-----------|------------|------------|------------|------------|------------|------------|
| Epaisseur plateaux (thickness-chuck) . . . . .  | <b>b</b>  | 150,0    | 150,0     | 180,0      | 180,0      | 180,0      | 180,0      | 180,0      | 180,0      |
| Passage de barre (internal-passage-Ø) . . . . . | <b>d</b>  | 155,0    | 155,0     | 155,0      | 155,0      | 190,0      | 190,0      | 190,0      | 190,0      |
| Centrage conique (conical-centering) . . . . .  | <b>d2</b> | 139,72   | 196,87    | 196,87     | 285,79     | 196,87     | 285,79     | 196,87     | 285,79     |
| Ø Fixation (fixing-Ø) . . . . .                 | <b>d4</b> | 171,4    | 235,0     | 235,0      | 330,20     | 235,0      | 330,20     | 235,0      | 330,20     |
| Tirants camlock (tie-rod camlock) . . . . .     | <b>d7</b> | 25,4     | 30,1      | 30,1       | 34,9       | 30,1       | 34,9       | 30,1       | 34,9       |

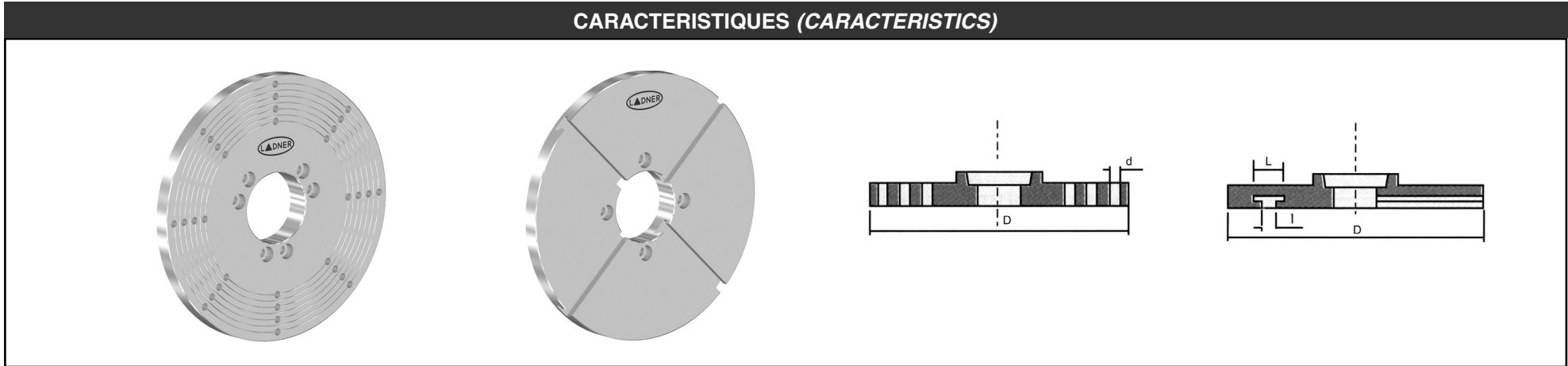
| ► 4 mors durs (4 hard-jaws) | Réf. | 020881CE84Q00 | 020881CF84Q00 | 020883CF84Q00 | 020883CG84Q00 | 020885CF84Q00 | 020885CG84Q00 | 020888CF84Q00 | 020888CG84Q00 |
|-----------------------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Poids mandrin (weight)      | kg   | 340           | 340           | 510           | 510           | 650           | 650           | 1000          | 1000          |

► Réf. standard en stock (standard ref. in stock) \* Consulter pour demande spéciale ou pour d'autres équipements en mors rapportés (\* Call Ladner for special manufacturing and other jaws equipments)

# P LATEAUX A TROUS / plates with holes

# P LATEAUX A RAINURES / plates with slots

## CARACTERISTIQUES (CHARACTERISTICS)



| Ø PLATEAUX (plates) / BROCHE (spindle) D       | 300 / 5" | 300 / 6" | 350 / 5" | 350 / 6" | 350 / 8" | 400 / 6" | 400 / 8" | 500 / 6" | 500 / 8" | 500 / 11" |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Ø trous (Ø holes) . . . . . d                  | 78,5     | 78,5     | 83,5     | 92,0     | 92,0     | 85,0     | 106,0    | 123,0    | 123,0    | 128,0     |
| Quantité de trous (quantities holes) . . . . . | 50,0     | 50,0     | 55,0     | 55,0     | 65,0     | 65,0     | 75,0     | 75,0     | 75,0     | 80,0      |

|                  |               |               |               |               |               |               |               |               |               |               |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| ► Réf. DIN 55026 | 021051BC00E00 | 021051BD00E00 | 021061BC00E00 | 021061BD00E00 | 021061BE00E00 | 021071BD00E00 | 021071BE00E00 | 021073BD00E00 | 021073BE00E00 | 021073BF00E00 |
| ► Réf. DIN 55027 | 021051DC00E00 | 021051DD00E00 | 021061DC00E00 | 021061DD00E00 | 021061DE00E00 | 021071DD00E00 | 021071DE00E00 | 021073DD00E00 | 021073DE00E00 | 021073DF00E00 |
| ► Réf. DIN 55029 | 021051CC00E00 | 021051CD00E00 | 021061CC00E00 | 021061CD00E00 | 021061CE00E00 | 021071CD00E00 | 021071CE00E00 | 021073CD00E00 | 021073CE00E00 | 021073CF00E00 |

|                                |      |      |      |      |      |      |      |      |      |      |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|
| Rainures (slots) T . . . . . l | 16   | 16,0 | 16,0 | 16,0 | 16,0 | 18,0 | 18,0 | 18,0 | 18,0 | 18,0 |
| Rainures (slots) T . . . . . L | 26,0 | 26,0 | 26,0 | 26,0 | 26,0 | 29,0 | 29,0 | 29,0 | 29,0 | 29,0 |

|                  |               |               |               |               |               |               |               |               |               |               |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| ► Réf. DIN 55026 | 031151BC00E00 | 031151BD00E00 | 031161BC00E00 | 031161BD00E00 | 031161BE00E00 | 031171BD00E00 | 031171BE00E00 | 031173BD00E00 | 031173BE00E00 | 031173BF00E00 |
| ► Réf. DIN 55027 | 031151DC00E00 | 031151DD00E00 | 031161DC00E00 | 031161DD00E00 | 031161DE00E00 | 031171DD00E00 | 031171DE00E00 | 031173DD00E00 | 031173DE00E00 | 031173DF00E00 |
| ► Réf. DIN 55029 | 031151CC00E00 | 031151CD00E00 | 031161CC00E00 | 031161CD00E00 | 031161CE00E00 | 031171CD00E00 | 031171CE00E00 | 031173CD00E00 | 031173CE00E00 | 031173CF00E00 |

| Ø PLATEAUX (plates) / BROCHE (spindle) D       | 630 / 6" | 630 / 8" | 630 / 11" | 700 / 8" | 700 / 11" | 800 / 8" | 800 / 11" |
|--|----------|----------|-----------|----------|-----------|----------|-----------|
| Ø trous (Ø holes) . . . . . d                  | 145,0    | 137,0    | 137,0     | 164,0    | 164,0     | 164,0    | 164,0     |
| Quantité de trous (quantities holes) . . . . . | 37       | 37       | 48        | 48       | 48        | 48       | 48        |

|                  |               |               |               |               |               |               |               |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| ► Réf. DIN 55026 | 021075BD00E00 | 021075BE00E00 | 021075BF00E00 | 021077BE00E00 | 021077BF00E00 | 021079BE00E00 | 021079BF00E00 |
| ► Réf. DIN 55027 | 021075DD00E00 | 021075DE00E00 | 021075DF00E00 | 021077DE00E00 | 021077DF00E00 | 021079DE00E00 | 021079DF00E00 |
| ► Réf. DIN 55029 | 021075CD00E00 | 021075CE00E00 | 021075CF00E00 | 021077CE00E00 | 021077CF00E00 | 021079CE00E00 | 021079CF00E00 |

|                                |      |      |      |      |      |      |      |
|--------------------------------|------|------|------|------|------|------|------|
| Rainures (slots) T . . . . . l | 22,0 | 22,0 | 22,0 | 22,0 | 22,0 | 22,0 | 22,0 |
| Rainures (slots) T . . . . . L | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 |

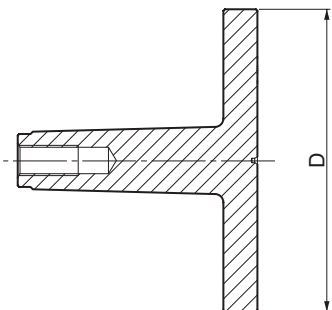
|                  |               |               |               |               |               |               |               |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| ► Réf. DIN 55026 | 031175BD00E00 | 031175BE00E00 | 031175BF00E00 | 031177BE00E00 | 031177BF00E00 | 031179BE00E00 | 031179BF00E00 |
| ► Réf. DIN 55027 | 031175DD00E00 | 031175DE00E00 | 031175DF00E00 | 031177DE00E00 | 031177DF00E00 | 031179DE00E00 | 031179DF00E00 |
| ► Réf. DIN 55029 | 031175CD00E00 | 031175CE00E00 | 031175CF00E00 | 031177CE00E00 | 031177CF00E00 | 031179CE00E00 | 031179CF00E00 |

► Réf. standard en stock (standard ref. in stock)

\* Consulter pour demande spéciale  
(\* Call Ladner for special manufacturing)

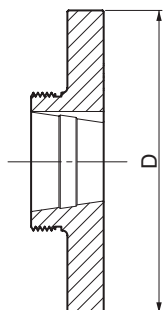
# FLASQUES D'ADAPTATION MANDRINS SUR BROCHE / flanges to fix chucks on spindle nose

## CARACTERISTIQUES (CHARACTERISTICS)



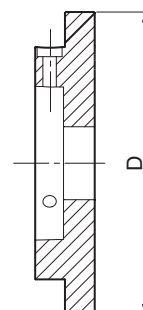
Cône morse

| N° Cône morse | Ø D | Réf. flasques (flanges) |
|---------------|-----|-------------------------|
| 2             | 80  | 030007HS00E00           |
| 2             | 100 | 030011HS00E00           |
| 3             | 80  | 030007HA00E00           |
| 3             | 100 | 030011HA00E00           |
| 3             | 125 | 030016HA00E00           |
| 3             | 160 | 030023HA00E00           |
| 4             | 100 | 030011HB00E00           |
| 4             | 125 | 030016HB00E00           |
| 4             | 160 | 030023HB00E00           |
| 4             | 200 | 030031HB00E00           |
| 5             | 160 | 030023HC00E00           |
| 5             | 200 | 030031HC00E00           |
| 5             | 250 | 030041HC00E00           |
| 6             | 250 | 030041HD00E00           |
| 6             | 315 | 030054HD00E00           |



Type L

| Type L Réf. flasques (flanges) |               |               |
|--------------------------------|---------------|---------------|
| Ø D                            | LOO           | LO            |
| 160                            | 030023FM00E00 | 030023FL00E00 |
| 200                            | 030031FM00E00 | 030031FL00E00 |
| 250                            | 030041FM00E00 | 030041FL00E00 |
| 315                            | -             | 030054FL00E00 |

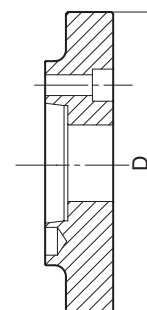


Type Cazeneuve

| Type L Réf. flasques (flanges) |               |               |               |
|--------------------------------|---------------|---------------|---------------|
| Ø D                            | L1            | L2            | L3            |
| 200                            | 030031FI00E00 | -             | -             |
| 250                            | 030041FI00E00 | -             | -             |
| 315                            | 030054FI00E00 | -             | -             |
| 400                            | 030071FI00E00 | 030071FJ00E00 | 030071FK00E00 |
| 500                            | 030073FI00E00 | 030073FJ00E00 | 030073FK00E00 |
| 630                            | -             | 030075FJ00E00 | 030075FK00E00 |

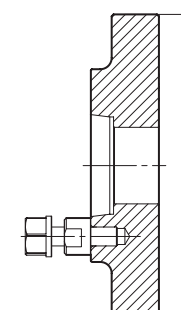
| TYPE CAZENEUVE         |                   |               |               |               |
|------------------------|-------------------|---------------|---------------|---------------|
| Ø flasques D (flanges) | Ø mandrin (chuck) | Réf. HBX      | Réf. HB rompu | Réf. HB HBY   |
| 160-300                | 160               | 030023GN00E00 | -             | -             |
| 350                    | 200               | 030031GN00E00 | -             | -             |
| 400-500                | 250               | 030041GN00E00 | 030041GP00E00 | 030041G000E00 |
| 600-700                | 315               | 030054GN00E00 | 030054GP00E00 | 030054G000E00 |
| 900-1000               | 315               | 030054GN00E00 | 030054GP00E00 | 030054G000E00 |
| -                      | 350               | -             | -             | 030061G000E00 |
| 800                    | 400               | -             | 030071GP00E00 | 030071G000E00 |
| -                      | 500               | -             | -             | 030073G000E00 |

DIN 55026



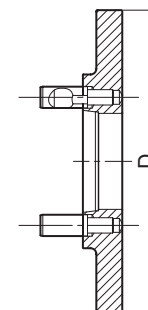
Type A2

DIN 55027



Type baïonnette

DIN 55029



Type camlock

| Ø broche (spindle) | Ø D | Réf. flasques (flanges) |               |               |
|--------------------|-----|-------------------------|---------------|---------------|
|                    |     | DIN 55026               | DIN 55027     | DIN 55029     |
| 3"                 | 100 | 030011BA00E00           | -             | -             |
| 3"                 | 125 | 030016BA00E00           | -             | 030016CA00E00 |
| 3"                 | 160 | -                       | -             | 030023CA00E00 |
| 4"                 | 125 | 030016BB00E00           | -             | 030016CB00E00 |
| 4"                 | 160 | 030023BB00E00           | -             | 030023CB00E00 |
| 4"                 | 200 | 030031BB00E00           | -             | 030031CB00E00 |
| 5"                 | 160 | 030023BC00E00           | 030023DC00E00 | 030023CC00E00 |
| 5"                 | 200 | 030031BC00E00           | 030031DC00E00 | 030031CC00E00 |
| 5"                 | 250 | 030041BC00E00           | 030041DC00E00 | 030041CC00E00 |
| 6"                 | 200 | 030031BD00E00           | 030031DD00E00 | 030031CD00E00 |
| 6"                 | 250 | 030041BD00E00           | 030041DD00E00 | 030041CD00E00 |
| 6"                 | 315 | 030054BD00E00           | 030054DD00E00 | 030054CD00E00 |
| 6"                 | 350 | 030061BD00E00           | 030061DD00E00 | 030061CD00E00 |
| 6"                 | 400 | 030071BD00E00           | 030071DD00E00 | 030071CD00E00 |
| 6"                 | 500 | 030073BD00E00           | 030073DD00E00 | 030073CD00E00 |
| 8"                 | 250 | 030041BE00E00           | 030041DE00E00 | 030041CE00E00 |
| 8"                 | 315 | 030054BE00E00           | 030054DE00E00 | 030054CE00E00 |
| 8"                 | 350 | 030061BE00E00           | 030061DE00E00 | 030061CE00E00 |
| 8"                 | 400 | 030071BE00E00           | 030071DE00E00 | 030071CE00E00 |
| 8"                 | 500 | 030073BE00E00           | 030073DE00E00 | 030073CE00E00 |
| 8"                 | 630 | 030075BE00E00           | 030075DE00E00 | 030075CE00E00 |
| 11"                | 315 | 030054BF00E00           | 030054DF00E00 | 030054CF00E00 |
| 11"                | 350 | 030061BF00E00           | 030061DF00E00 | 030061CF00E00 |
| 11"                | 400 | 030071BF00E00           | 030071DF00E00 | 030071CF00E00 |
| 11"                | 500 | 030073BF00E00           | 030073DF00E00 | 030073CF00E00 |
| 11"                | 630 | 030075BF00E00           | 030075DF00E00 | 030075CF00E00 |
| 15"                | 630 | 030075BG00E00           | 030075DG00E00 | 030075CG00E00 |

► Réf. standard en stock (standard ref. in stock)

\* Consulter pour demande spéciale

(\* Call Ladner for special manufacturing)

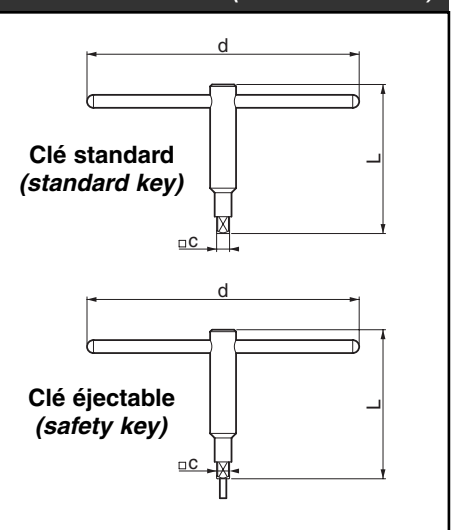
# PIECES DETACHEES POUR MANDRINS A SERRAGE CONCENTRIQUE (suite) / PIECES FOR CONCENTRIC-CHUCK

## → CLE (key)

| Ø MANDRIN (ø chuck)                           | D | 80            | 100           | 125           | 160           | 200-215       | 250           | 300-315       | 350-400       |
|---|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Longueur tige (length shank) . . . . . d      |   | 110           | 135           | 170           | 210           | 275           | 350           | 375           | 400           |
| Longueur corps (length body) . . . . . L      |   | 60            | 72            | 80            | 115           | 135           | 135           | 125           | 125           |
| Carré de manœuvre (square moving) . . . . . c |   | 6             | 8             | 9             | 10            | 12            | 12            | 14            | 16            |
| ➤ Réf. standard (standard ref.)               |   | 4720070000G00 | 4720110000G00 | 4720160000G00 | 4720230000G00 | 4720310000G00 | 4720410000G00 | 4720540000G00 | 4720710000G00 |
| ➤ Réf. éjectables (safety key ref.)           |   | -             | -             | 4720160000G01 | 4720230000G01 | 4720310000G01 | 4720410000G01 | 4720540000G01 | 4720710000G01 |

| Ø MANDRIN (ø chuck)                           | D | 500           | 630           |
|---|---|---------------|---------------|
| Longueur tige (length shank) . . . . . d      |   | 500           | 700           |
| Longueur corps (length body) . . . . . L      |   | 150           | 160           |
| Carré de manœuvre (square moving) . . . . . c |   | 16            | 20            |
| ➤ Réf. standard (standard ref.)               |   | 4720730000G00 | 4720750000G00 |
| ➤ Réf. éjectables (safety key ref.)           |   | -             | -             |

### CARACTERISTIQUES (CHARACTERISTICS)



# PIECES DETACHEES POUR MANDRINS A COMBINAISONS

## PIECES FOR CONCENTRIC-CHUCKS WITH COMBINAISONS JAWS

## → CLE (key)

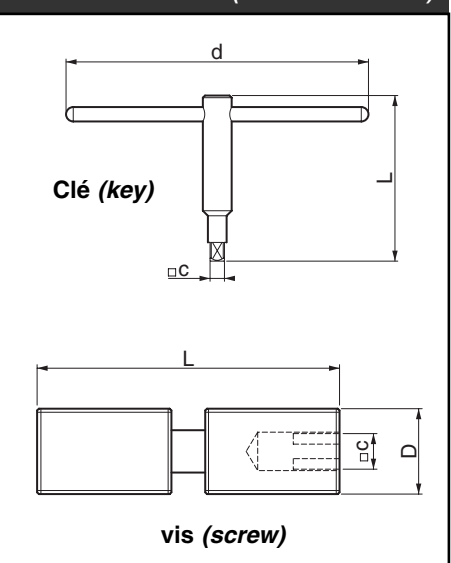
| Ø MANDRIN (ø chuck)                           | 160 ACP 4"/5" | 200 ACP 4"/5" | 215 6"        | 250 ACP 6"    | 315 ACP 6"/8" | 400 ACP 6"/8"/11" |
|---|---------------|---------------|---------------|---------------|---------------|-------------------|
| Longueur tige (length shank) . . . . . d      | 135           | 135           | 135           | 170           | 170           | 210               |
| Carré de manœuvre (square moving) . . . . . c | 7             | 7             | 7             | 10            | 10            | 12                |
| Longueur corps (length body) . . . . . L      | 115           | 115           | 115           | 154           | 154           | 200               |
| ➤ Réf. standard (standard ref.)               | 4820230000G00 | 4820230000G00 | 4820230000G00 | 4820410000G00 | 4820410000G00 | 4820710000G00     |

## → VIS pour MORS (male screw for jaws)

| Ø MANDRIN (ø chuck)                 | 160 ACP 4"/5" | 200 ACP 4"/5" | 215 6"        | 250 ACP 6"    | 315 ACP 6"/8" | 400 ACP 6"/8"/11" |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|-------------------|
| Diamètre (diameter) D               | 16            | 16            | 16            | 24            | 24            | 28                |
| Carré de manœuvre (square moving) c | 7             | 7             | 7             | 10            | 10            | 12                |
| Longueur (length) L                 | 62            | 72            | 72            | 85            | 98            | 123               |
| ➤ Réf. standard (standard ref.)     | 2020230000I00 | 2020310000I00 | 2020310000I00 | 2020410000I00 | 2020540000I00 | 2020710000I00     |

➤ Réf. standard en stock (standard ref. in stock)

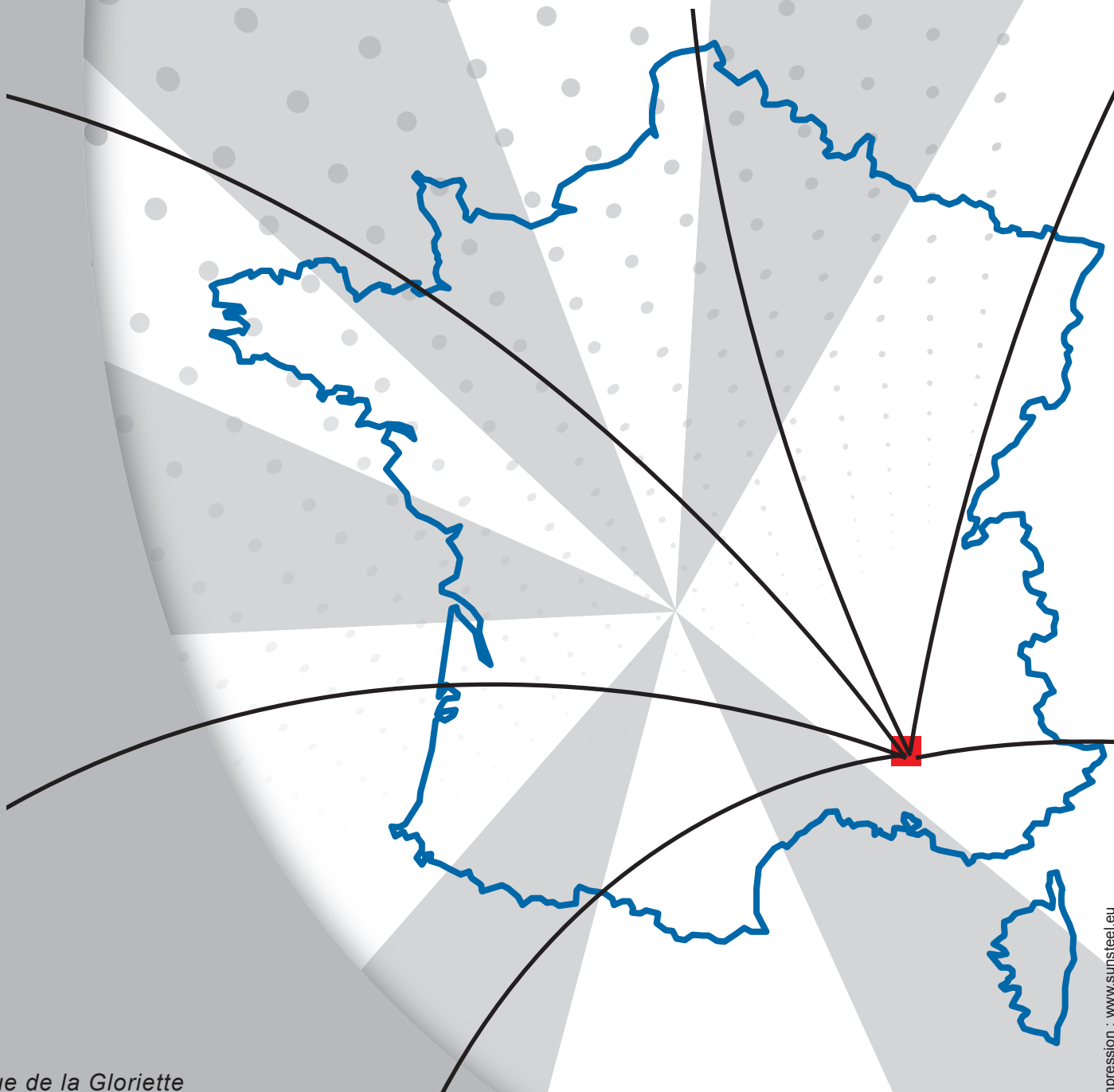
### CARACTERISTIQUES (CHARACTERISTICS)



PERÇAGE - TARAUDAGE - FRAISAGE - PLAQUETTES CARBURE - SCIAGE - LUBRIFIANTS - ATTACHEMENTS - ÉBAVURAGE - MACHINES -

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