

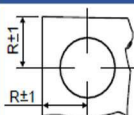
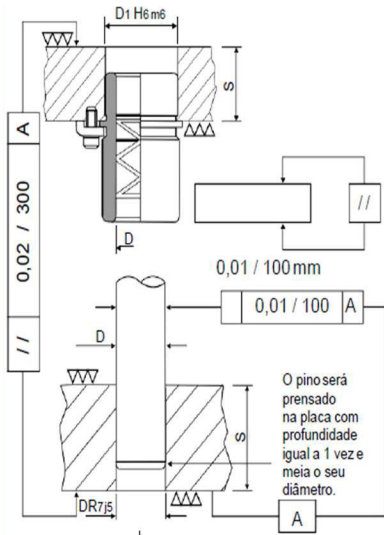
PBG

# COMPONENTES BASES PARA ESTAMPO



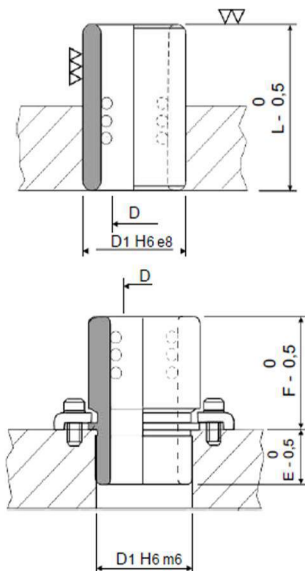
## COMPONENTES DE BASES PARA ESTAMPAS

### MONTAGEM DE PINOS DE GUIA LISOS, BUCHAS DESMONTÁVEIS EM GERAL



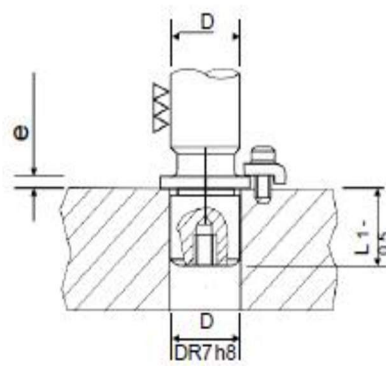
TOLERÂNCIA DO CENTRO DE LOCAÇÃO DOS PINOS GUIA

### MONTAGEM DAS CAMISAS

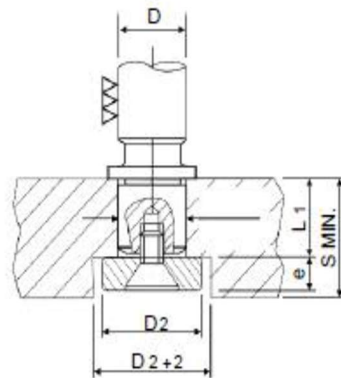


### MONTAGEM DE PINOS DE GUIA

#### FIXAÇÃO POR GRAMPOS

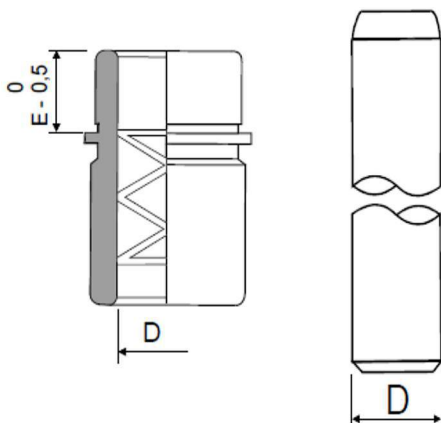


#### FIXAÇÃO CENTRAL



S MÍN.: espessura mínima da placa para a utilização do Pino de Guia Desmontável Fixação Central.

### CLASSES DE FOLGA



Dimensões Nominais D: sua tolerância depende da Classe de Folga desejada.

- **Classe de Folga 1 - H4 h3.**

Folga entre punção e matriz max 0,02mm, em chapas até 0,4 mm.

- **Classe de Folga 2 - H6, h5.**

Folga entre punção e matriz acima de 0,02mm e máxima 0,06mm, em chapas acima de 0,4mm até 3mm.

- **Classe de Folga 3 - H7, h6.**

Folga entre punção e matriz acima de 0,06mm em chapas acima de 3mm.

| D     | L1 | e    | S Min. |
|-------|----|------|--------|
| 19/20 | 18 | 5,5  | 24     |
| 24/25 | 22 | 7,5  | 30     |
| 30/32 | 28 | 7,5  | 43     |
| 38/40 | 35 | 9,5  | 49     |
| 48/50 | 45 | 9,5  | 55     |
| 63    | 45 | 9,5  | 55     |
| 80    | 60 | 11,5 | 73     |

| D        | D1 | L1 | M | I  | L   | CODIGO    |           |
|----------|----|----|---|----|-----|-----------|-----------|
|          |    |    |   |    |     | Ø 19      | Ø 20      |
| 19<br>20 | 25 | 20 | 5 | 16 | 80  | 14-19080- | 14-20080- |
|          |    |    |   |    | 90  | 090-      | 090-      |
|          |    |    |   |    | 100 | 100-      | 100-      |
|          |    |    |   |    | 110 | 110-      | 110-      |
|          |    |    |   |    | 125 | 125-      | 125-      |
|          |    |    |   |    | 140 | 140-      | 140-      |
|          |    |    |   |    | 160 | 160-      | 160-      |

| D        | D1 | L1 | M | I  | L   | CODIGO    |           |
|----------|----|----|---|----|-----|-----------|-----------|
|          |    |    |   |    |     | Ø 24      | Ø 25      |
| 24<br>25 | 32 | 25 | 6 | 16 | 80  | 14-24080- | 14-25080- |
|          |    |    |   |    | 90  | 090-      | 090-      |
|          |    |    |   |    | 100 | 100-      | 100-      |
|          |    |    |   |    | 110 | 110-      | 110-      |
|          |    |    |   |    | 125 | 125-      | 125-      |
|          |    |    |   |    | 140 | 140-      | 140-      |
|          |    |    |   |    | 160 | 160-      | 160-      |
|          |    |    |   |    | 180 | 180-      | 180-      |
|          |    |    |   |    | 200 | 200-      | 200-      |

| D        | D1 | L1 | M | I  | L   | CODIGO    |           |
|----------|----|----|---|----|-----|-----------|-----------|
|          |    |    |   |    |     | Ø 30      | Ø 32      |
| 30<br>32 | 40 | 32 | 8 | 22 | 100 | 14-30100- | 14-32100- |
|          |    |    |   |    | 110 | 110-      | 110-      |
|          |    |    |   |    | 125 | 125-      | 125-      |
|          |    |    |   |    | 140 | 140-      | 140-      |
|          |    |    |   |    | 160 | 160-      | 160-      |
|          |    |    |   |    | 180 | 180-      | 180-      |
|          |    |    |   |    | 200 | 200-      | 200-      |
|          |    |    |   |    | 220 | 220-      | 220-      |
|          |    |    |   |    | 250 | 250-      | 250-      |
|          |    |    |   |    | 280 | 280-      | 280-      |

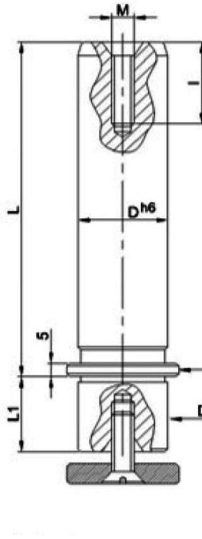
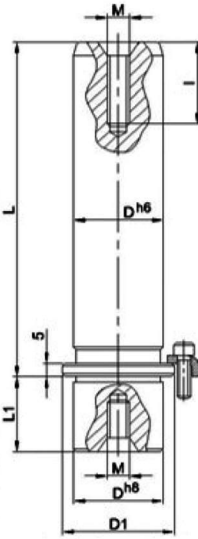
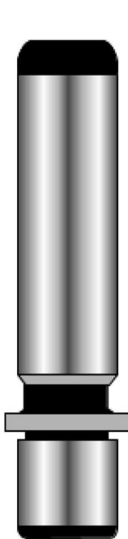
| D        | D1 | L1 | M  | I  | L   | CODIGO    |           |
|----------|----|----|----|----|-----|-----------|-----------|
|          |    |    |    |    |     | Ø 38      | Ø 40      |
| 38<br>40 | 50 | 40 | 10 | 22 | 100 | 14-38100- | 14-40100- |
|          |    |    |    |    | 110 | 110-      | 110-      |
|          |    |    |    |    | 125 | 125-      | 125-      |
|          |    |    |    |    | 140 | 140-      | 140-      |
|          |    |    |    |    | 160 | 160-      | 160-      |
|          |    |    |    |    | 180 | 180-      | 180-      |
|          |    |    |    |    | 200 | 200-      | 200-      |
|          |    |    |    |    | 220 | 220-      | 220-      |
|          |    |    |    |    | 250 | 250-      | 250-      |
|          |    |    |    |    | 280 | 280-      | 280-      |

| D        | D1 | L1 | M  | I  | L   | CODIGO    |           |
|----------|----|----|----|----|-----|-----------|-----------|
|          |    |    |    |    |     | Ø 48      | Ø 50      |
| 48<br>50 | 63 | 45 | 12 | 30 | 110 | 14-48110- | 14-50110- |
|          |    |    |    |    | 125 | 125-      | 125-      |
|          |    |    |    |    | 140 | 140-      | 140-      |
|          |    |    |    |    | 160 | 160-      | 160-      |
|          |    |    |    |    | 180 | 180-      | 180-      |
|          |    |    |    |    | 200 | 200-      | 200-      |
|          |    |    |    |    | 220 | 220-      | 220-      |
|          |    |    |    |    | 250 | 250-      | 250-      |
|          |    |    |    |    | 280 | 280-      | 280-      |
|          |    |    |    |    | 315 | 315-      | 315-      |
|          |    |    |    |    | 355 | 355-      | 355-      |
|          |    |    |    |    | 400 | 400-      | 400-      |

| D  | D1 | L1 | M  | I  | L   | CODIGO    |  |
|----|----|----|----|----|-----|-----------|--|
|    |    |    |    |    |     | Ø 63      |  |
| 63 | 76 | 50 | 16 | 35 | 125 | 14-63125- |  |
|    |    |    |    |    | 140 | 140-      |  |
|    |    |    |    |    | 160 | 160-      |  |
|    |    |    |    |    | 180 | 180-      |  |
|    |    |    |    |    | 200 | 200-      |  |
|    |    |    |    |    | 220 | 220-      |  |
|    |    |    |    |    | 250 | 250-      |  |
|    |    |    |    |    | 280 | 280-      |  |
|    |    |    |    |    | 315 | 315-      |  |
|    |    |    |    |    | 355 | 355-      |  |
|    |    |    |    |    | 400 | 400-      |  |

| D  | D1 | L1 | M  | I  | L   | CODIGO    |  |
|----|----|----|----|----|-----|-----------|--|
|    |    |    |    |    |     | Ø 80      |  |
| 80 | 93 | 60 | 20 | 40 | 125 | 14-80125- |  |
|    |    |    |    |    | 140 | 125-      |  |
|    |    |    |    |    | 160 | 160-      |  |
|    |    |    |    |    | 180 | 180-      |  |
|    |    |    |    |    | 200 | 200-      |  |
|    |    |    |    |    | 220 | 220-      |  |
|    |    |    |    |    | 250 | 250-      |  |
|    |    |    |    |    | 280 | 280-      |  |
|    |    |    |    |    | 315 | 315-      |  |
|    |    |    |    |    | 355 | 355-      |  |
|    |    |    |    |    | 400 | 400-      |  |
|    |    |    |    |    | 500 | 500-      |  |

Aço Ligado Cementado / Temperado  
60 - 64 HRc



Ø48 - Ø50 -  
Ø63 - Ø80mm

COMO SOLICITAR 14-DDLLL-06 ou 07

UTILIZAÇÃO



BUCHA  
DESMONTÁVEL



CAMISA  
DESMONTÁVEL



CAMISA  
COLADA



GPM1



GPM2

GRAMPOS

| D     | RAIO |      | Q    | QT | A    | B    | C   | D    | T  | CÓDIGO   |
|-------|------|------|------|----|------|------|-----|------|----|----------|
|       | O    | P    |      |    |      |      |     |      |    |          |
| 19/20 | 16,0 | 22,8 | 17,0 | 3  | 13,5 | 13,0 | 3,5 | 6,7  | 13 | 18-10-01 |
| 24/25 | 20,0 | 29,0 | 21,3 | 3  | 17,0 | 16,0 | 4,9 | 10,0 | 16 | 18-12-01 |
| 30/32 | 23,5 | 32,3 | 23,1 | 3  | 17,0 | 16,0 | 4,9 | 10,0 | 16 | 18-12-01 |
| 38/40 | 28,5 | 38,3 | 26,1 | 3  | 19,0 | 16,0 | 5,9 | 11,0 | 19 | 18-16-01 |
| 48/40 | 36,0 | 45,8 | 29,8 | 4  | 19,0 | 16,0 | 5,9 | 11,0 | 19 | 18-16-01 |
| 63    | 42,5 | 52,3 | 33,1 | 4  | 19,0 | 16,0 | 5,9 | 11,0 | 19 | 18-16-01 |
| 80    | 51,0 | 61,8 | 38,1 | 4  | 19,0 | 16,0 | 5,9 | 11,0 | 19 | 18-16-01 |

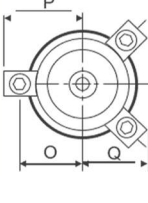
PARAFUSOS

| D     | R | L  | CODIGO      | M  | La |
|-------|---|----|-------------|----|----|
| 19/20 | 6 | 16 | 73-06016-02 | 5  | 20 |
| 24/25 | 6 | 16 | 73-06016-02 | 6  | 20 |
| 30/32 | 6 | 20 | 73-06020-20 | 8  | 30 |
| 38/40 | 8 | 20 | 73-08020-02 | 10 | 30 |
| 48/50 | 8 | 20 | 73-08020-02 | 12 | 30 |
| 63    | 8 | 20 | 73-08020-02 | 16 | 35 |
| 80    | 8 | 20 | 73-08020-02 | 20 | 35 |

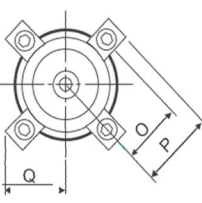
ARRUELAS

| D2 | e    | CODIGO   |
|----|------|----------|
| 25 | 5,5  | 19-25-00 |
| 32 | 7,5  | 19-32-00 |
| 40 | 7,5  | 19-40-00 |
| 50 | 9,5  | 19-50-00 |
| 63 | 9,5  | 19-63-00 |
| 76 | 9,5  | 19-76-00 |
| 93 | 11,5 | 19-93-00 |

POSIÇÃO DOS GRAMPIS

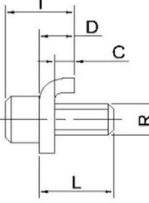


Ø19 - Ø40

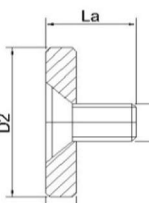


Ø48 - Ø80

GRAMPO

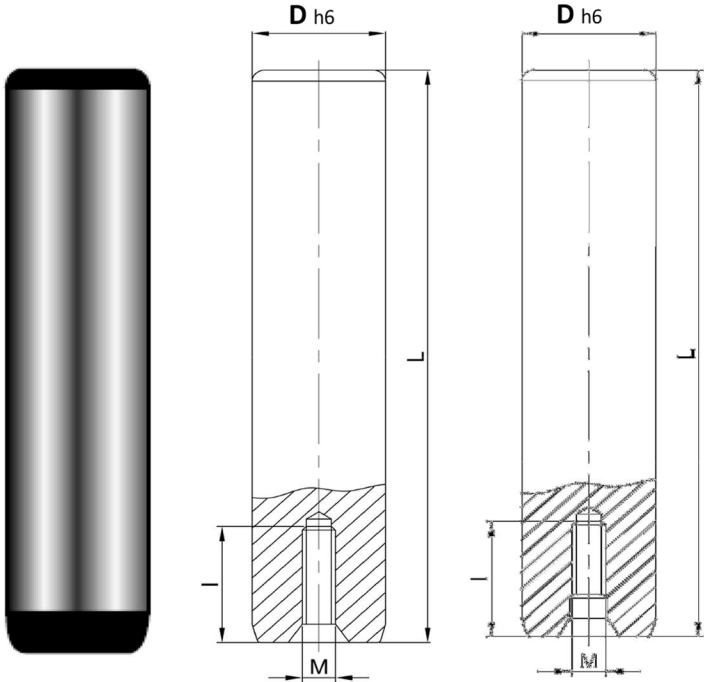


ARRUELA



| D        | M  | L   | I  | CODIGO      |             |
|----------|----|-----|----|-------------|-------------|
|          |    |     |    | Ø19         | Ø 20        |
| 19<br>20 | 5  | 100 | 10 | 13-19100-02 | 13-20100-02 |
|          |    |     |    | 110-02      | 110-02      |
|          |    |     |    | 125-02      | 125-02      |
|          |    |     |    | 140-02      | 140-02      |
|          |    |     |    | 160-02      | 160-02      |
|          |    |     |    | 180-02      | 180-02      |
|          |    |     |    | 200-02      | 200-02      |
| D        | M  | L   | I  | CODIGO      |             |
|          |    |     |    | Ø24         | Ø 25        |
| 24<br>25 | 6  | 100 | 10 | 13-24100-02 | 13-25100-02 |
|          |    |     |    | 110-02      | 110-02      |
|          |    |     |    | 125-02      | 125-02      |
|          |    |     |    | 140-02      | 140-02      |
|          |    |     |    | 160-02      | 160-02      |
|          |    |     |    | 180-02      | 180-02      |
|          |    |     |    | 200-02      | 200-02      |
|          |    |     |    | 220-02      | 220-02      |
|          |    |     |    | 250-02      | 250-02      |
|          |    |     |    | 280-02      | 280-02      |
| D        | M  | L   | I  | CODIGO      |             |
|          |    |     |    | Ø30         | Ø32         |
| 30<br>32 | 8  | 110 | 15 | 13-30110-02 | 13-32110-02 |
|          |    |     |    | 125-02      | 125-02      |
|          |    |     |    | 140-02      | 140-02      |
|          |    |     |    | 160-02      | 160-02      |
|          |    |     |    | 180-02      | 180-02      |
|          |    |     |    | 200-02      | 200-02      |
|          |    |     |    | 220-02      | 220-02      |
|          |    |     |    | 250-02      | 250-02      |
|          |    |     |    | 280-02      | 280-02      |
|          |    |     |    | 315-02      | 315-02      |
| D        | M  | L   | I  | CODIGO      |             |
|          |    |     |    | Ø38         | Ø40         |
| 38<br>40 | 10 | 125 | 20 | 13-38125-02 | 13-40125-02 |
|          |    |     |    | 140-02      | 140-02      |
|          |    |     |    | 160-02      | 160-02      |
|          |    |     |    | 180-02      | 180-02      |
|          |    |     |    | 200-02      | 200-02      |
|          |    |     |    | 220-02      | 220-02      |
|          |    |     |    | 250-02      | 250-02      |
|          |    |     |    | 280-02      | 280-02      |
|          |    |     |    | 315-02      | 315-02      |
|          |    |     |    | 355-02      | 355-02      |
| D        | M  | L   | I  | CODIGO      |             |
|          |    |     |    | Ø48         | Ø50         |
| 48<br>50 | 12 | 160 | 25 | 13-48160-02 | 13-50160-02 |
|          |    |     |    | 180-02      | 180-02      |
|          |    |     |    | 200-02      | 200-02      |
|          |    |     |    | 220-02      | 220-02      |
|          |    |     |    | 250-02      | 250-02      |
|          |    |     |    | 280-02      | 280-02      |
|          |    |     |    | 315-02      | 315-02      |
|          |    |     |    | 355-02      | 355-02      |
|          |    |     |    | 400-02      | 400-02      |
|          |    |     |    | 450-02      | 450-02      |
| D        | M  | L   | I  | CODIGO      |             |
|          |    |     |    | Ø63         |             |
| 63       | 16 | 200 | 30 |             | 13-63200-02 |
|          |    |     |    |             | 220-02      |
|          |    |     |    |             | 250-02      |
|          |    |     |    |             | 280-02      |
|          |    |     |    |             | 315-02      |
|          |    |     |    |             | 355-02      |
|          |    |     |    |             | 400-02      |
| D        | M  | L   | I  | CODIGO      |             |
|          |    |     |    | Ø80         |             |
| 80       | 20 | 200 | 35 |             | 13-80200-02 |
|          |    |     |    |             | 220-02      |
|          |    |     |    |             | 250-02      |
|          |    |     |    |             | 280-02      |
|          |    |     |    |             | 315-02      |
|          |    |     |    |             | 355-02      |
|          |    |     |    |             | 400-02      |
|          |    |     |    |             | 450-02      |
|          |    |     |    |             | 500-02      |

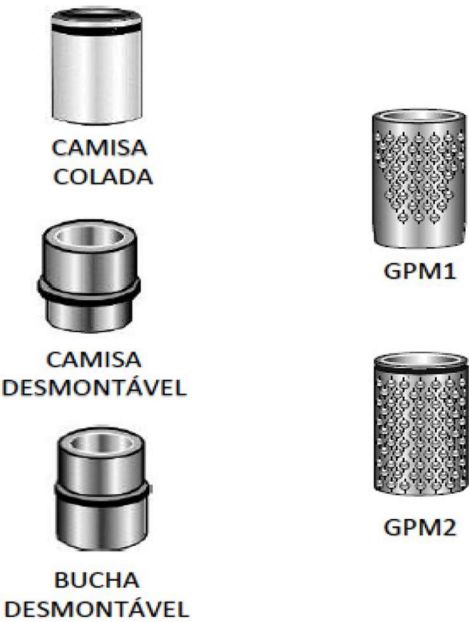
Aço Ligado Cementado / Temperado  
60 - 64 HRc



Ø48 - Ø50 -  
Ø63 - Ø80mm

COMO SOLICITAR  
13-DDLLL-02

UTILIZAÇÃO





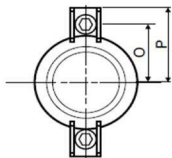
PINO DE GUIA DESMONTÁVEL  
REF.: 06 - 07



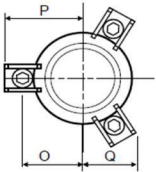
PINO DE GUIA LISO  
REF.: 02

UTILIZAÇÃO COM TODAS  
AS FLANGES

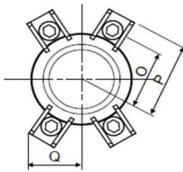
POSIÇÃO DOS GRAMPOS PARA BUCHAS DE FLANGE EXTRA CURTA



P/ Ø 19 a 20



P/ Ø 24 a 40



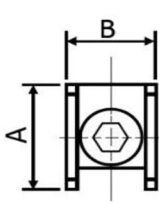
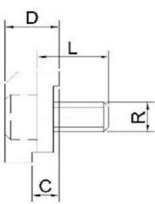
P/ Ø 48 a 80

| D     | RAIOS |      | Q     | QT PINO | A    | B    | C   | D    | CÓDIGO   |
|-------|-------|------|-------|---------|------|------|-----|------|----------|
|       | O     | P    |       |         |      |      |     |      |          |
| 19/20 | 22    | 28,0 |       | 2       | 14,0 | 14,5 | 3,5 | 9,0  | 18-20-01 |
| 24/25 | 28    | 35,8 | 24,40 | 3       | 17,0 | 14,5 | 4,5 | 10,0 | 18-22-01 |
| 30/32 | 33    | 40,8 | 26,90 | 3       | 17,0 | 14,5 | 4,5 | 10,0 | 18-22-01 |
| 38/40 | 39    | 48,8 | 32,00 | 3       | 21,0 | 17,0 | 5,5 | 11,0 | 18-24-01 |
| 48/50 | 46    | 55,3 | 35,00 | 4       | 21,0 | 17,0 | 5,5 | 11,0 | 18-24-01 |
| 63    | 55    | 64,8 | 39,80 | 4       | 21,0 | 17,0 | 5,5 | 11,0 | 18-24-01 |
| 80    | 66    | 77,7 | 46,7  | 4       | 21,0 | 17,0 | 5,5 | 11,0 | 18-24-01 |

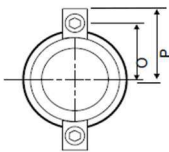
PARAFUSOS

| D     | R | L  | CÓDIGO      |
|-------|---|----|-------------|
| 19/20 | 6 | 16 | 73-06016-02 |
| 24/25 | 6 | 16 | 73-06016-02 |
| 30/32 | 6 | 20 | 73-06020-02 |
| 38/40 | 8 | 20 | 73-08020-02 |
| 48/50 | 8 | 20 | 73-08020-02 |
| 63    | 8 | 20 | 73-08020-02 |
| 80    | 8 | 20 | 73-08020-02 |

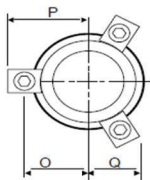
GRAMPO



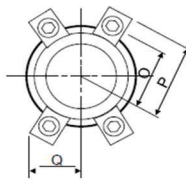
POSIÇÃO DOS GRAMPOS PARA BUCHAS DE FLANGE CURTA, LONGA,  
EXTRA LONGA E SUPER LONGA.



P/ Ø 19 a 20



P/ Ø 24 a 40



P/ Ø 48 a 80

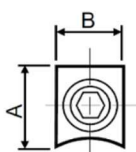
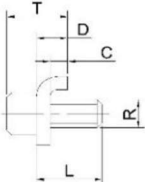
GRAMPOS

| D     | RAIOS |      | Q    | QT PINO | A    | B    | C   | D    | T  | CÓDIGO   |
|-------|-------|------|------|---------|------|------|-----|------|----|----------|
|       | O     | P    |      |         |      |      |     |      |    |          |
| 19/20 | 20,0  | 26,7 |      | 2       | 13,5 | 13,0 | 3,5 | 6,7  | 13 | 18-10-01 |
| 24/25 | 26,5  | 35,3 | 24,6 | 3       | 17,0 | 16,0 | 4,9 | 10,0 | 16 | 18-12-01 |
| 30/32 | 31,0  | 39,8 | 26,8 | 3       | 17,0 | 16,0 | 4,9 | 10,0 | 16 | 18-12-01 |
| 38/40 | 36,0  | 45,8 | 29,8 | 3       | 19,0 | 16,0 | 5,9 | 11,0 | 19 | 18-16-01 |
| 48/50 | 42,0  | 51,8 | 32,8 | 4       | 19,0 | 16,0 | 5,9 | 11,0 | 19 | 18-16-01 |
| 63    | 51,0  | 60,8 | 37,3 | 4       | 19,0 | 16,0 | 5,9 | 11,0 | 19 | 18-16-01 |
| 80    | 63,0  | 73,7 | 43,5 | 4       | 19,0 | 16,0 | 5,9 | 11,0 | 19 | 18-16-01 |

PARAFUSOS

| D     | R | L  | CÓDIGO      |
|-------|---|----|-------------|
| 19/20 | 6 | 16 | 73-06016-02 |
| 24/25 | 6 | 16 | 73-06016-02 |
| 30/32 | 6 | 20 | 73-06020-02 |
| 38/40 | 8 | 20 | 73-08020-02 |
| 48/50 | 8 | 20 | 73-08020-02 |
| 63    | 8 | 20 | 73-08020-02 |
| 80    | 8 | 20 | 73-08020-02 |

GRAMPOS



FLANGE EXTRA CURTA



FLANGE CURTA



FLANGE LONGA



FLANGE EXTRA LONGA

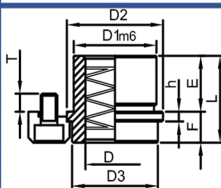


FLANGE SUPER LONGA



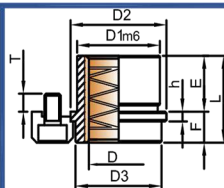
| D  | D1  | D2   | D3 | E  | F  | L  | h   | T  | CÓDIGO    |
|----|-----|------|----|----|----|----|-----|----|-----------|
| 19 | 28  | 32,5 | 29 | 18 | 10 | 28 | 3,2 | 6  | 15-19028- |
| 20 | 28  | 32,5 | 29 | 18 | 10 | 28 | 3,2 | 6  | 15-20028- |
| 24 | 38  | 44   | 36 | 23 | 10 | 33 | 5   | 6  | 15-24038- |
| 25 | 38  | 44   | 36 | 23 | 10 | 33 | 5   | 6  | 15-25038- |
| 30 | 45  | 54   | 43 | 30 | 10 | 40 | 5   | 10 | 15-30045- |
| 32 | 45  | 54   | 43 | 30 | 10 | 40 | 5   | 10 | 15-32045- |
| 38 | 54  | 63   | 50 | 38 | 14 | 52 | 5   | 10 | 15-38054- |
| 40 | 54  | 63   | 50 | 38 | 14 | 52 | 5   | 10 | 15-40054- |
| 48 | 65  | 75   | 64 | 48 | 14 | 62 | 5   | 20 | 15-48065- |
| 50 | 65  | 75   | 64 | 48 | 14 | 62 | 5   | 20 | 15-50065- |
| 63 | 81  | 93   | 79 | 61 | 14 | 75 | 5   | 20 | 15-63081- |
| 80 | 100 | 115  | 99 | 78 | 14 | 92 | 5   | 20 | 15-80100- |

## FLANGE EXTRA CURTA



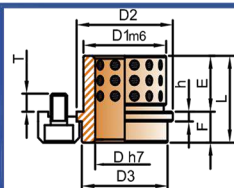
AÇO LIGADO

15-.....-20



INSERTO DE BRONZE

15-.....-23

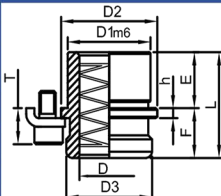


BRONZE GRAFITADA

15-.....-26

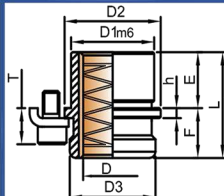
| D  | D1  | D2   | D3  | E  | F  | L  | h   | T  | CÓDIGO    |
|----|-----|------|-----|----|----|----|-----|----|-----------|
| 19 | 28  | 32,5 | 29  | 18 | 16 | 34 | 3,2 | 12 | 15-19028- |
| 20 | 28  | 32,5 | 29  | 18 | 16 | 34 | 3,2 | 12 | 15-20028- |
| 24 | 38  | 44   | 40  | 22 | 20 | 42 | 5   | 15 | 15-24038- |
| 25 | 38  | 44   | 40  | 22 | 20 | 42 | 5   | 15 | 15-25038- |
| 30 | 45  | 54   | 49  | 25 | 20 | 45 | 5   | 15 | 15-30045- |
| 32 | 45  | 54   | 49  | 25 | 20 | 45 | 5   | 15 | 15-32045- |
| 38 | 54  | 63   | 58  | 30 | 20 | 50 | 5   | 18 | 15-38054- |
| 40 | 54  | 63   | 58  | 30 | 20 | 50 | 5   | 18 | 15-40054- |
| 48 | 65  | 75   | 70  | 35 | 20 | 55 | 5   | 18 | 15-48065- |
| 50 | 65  | 75   | 70  | 35 | 20 | 55 | 5   | 18 | 15-50065- |
| 63 | 81  | 93   | 88  | 48 | 20 | 68 | 5   | 18 | 15-63081- |
| 80 | 100 | 115  | 110 | 48 | 20 | 68 | 5   | 18 | 15-80100- |

## FLANGE CURTA



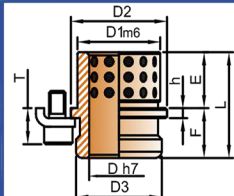
AÇO LIGADO

15-.....-25



INSERTO DE BRONZE

15-.....-28

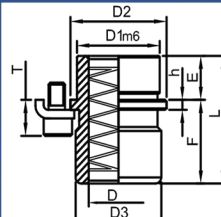


BRONZE GRAFITADA

15-.....-31

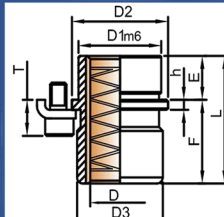
| D  | D1  | D2   | D3  | E  | F  | L  | h   | T  | CÓDIGO    |
|----|-----|------|-----|----|----|----|-----|----|-----------|
| 19 | 28  | 32,5 | 29  | 18 | 32 | 50 | 3,2 | 12 | 15-19028- |
| 20 | 28  | 32,5 | 29  | 18 | 32 | 50 | 3,2 | 12 | 15-20028- |
| 24 | 38  | 44   | 40  | 22 | 50 | 72 | 5   | 15 | 15-24038- |
| 25 | 38  | 44   | 40  | 22 | 50 | 72 | 5   | 15 | 15-25038- |
| 30 | 45  | 54   | 49  | 25 | 50 | 75 | 5   | 15 | 15-30045- |
| 32 | 45  | 54   | 49  | 25 | 50 | 75 | 5   | 15 | 15-32045- |
| 38 | 54  | 63   | 58  | 30 | 50 | 80 | 5   | 18 | 15-38054- |
| 40 | 54  | 63   | 58  | 30 | 50 | 80 | 5   | 18 | 15-40054- |
| 48 | 65  | 75   | 70  | 35 | 50 | 85 | 5   | 18 | 15-48065- |
| 50 | 65  | 75   | 70  | 35 | 50 | 85 | 5   | 18 | 15-50065- |
| 63 | 81  | 93   | 88  | 48 | 50 | 98 | 5   | 18 | 15-63081- |
| 80 | 100 | 115  | 110 | 48 | 50 | 98 | 5   | 18 | 15-80100- |

## FLANGE LONGA



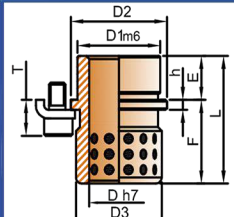
AÇO LIGADO

15-.....-30



INSERTO DE BRONZE

15-.....-33

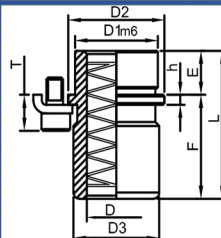


BRONZE GRAFITADA

15-.....-36

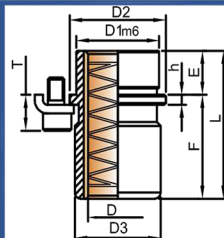
| D  | D1  | D2   | D3  | E  | F  | L   | h   | T  | CÓDIGO    |
|----|-----|------|-----|----|----|-----|-----|----|-----------|
| 19 | 28  | 32,5 | 29  | 18 | 50 | 68  | 3,2 | 12 | 15-19028- |
| 20 | 28  | 32,5 | 29  | 18 | 50 | 68  | 3,2 | 12 | 15-20028- |
| 24 | 38  | 44   | 40  | 22 | 75 | 97  | 5   | 15 | 15-24038- |
| 25 | 38  | 44   | 40  | 22 | 75 | 97  | 5   | 15 | 15-25038- |
| 30 | 45  | 54   | 49  | 25 | 75 | 100 | 5   | 15 | 15-30045- |
| 32 | 45  | 54   | 49  | 25 | 75 | 100 | 5   | 15 | 15-32045- |
| 38 | 54  | 63   | 58  | 30 | 75 | 105 | 5   | 18 | 15-38054- |
| 40 | 54  | 63   | 58  | 30 | 75 | 105 | 5   | 18 | 15-40054- |
| 48 | 65  | 75   | 70  | 35 | 75 | 110 | 5   | 18 | 15-48065- |
| 50 | 65  | 75   | 70  | 35 | 75 | 110 | 5   | 18 | 15-50065- |
| 63 | 81  | 93   | 88  | 48 | 75 | 123 | 5   | 18 | 15-63081- |
| 80 | 100 | 115  | 110 | 48 | 75 | 123 | 5   | 18 | 15-80100- |

## FLANGE EXTRA LONGA



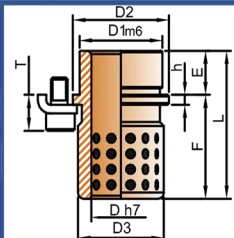
AÇO LIGADO

15-.....-35



INSERTO DE BRONZE

15-.....-38

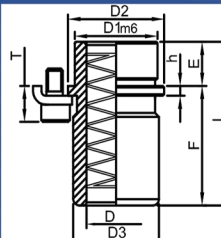


BRONZE GRAFITADA

15-.....-41

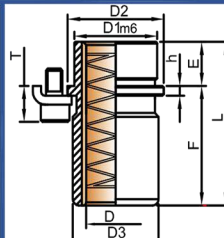
| D  | D1  | D2  | D3  | E  | F   | L   | h | T  | CÓDIGO    |
|----|-----|-----|-----|----|-----|-----|---|----|-----------|
| 19 |     |     |     |    |     |     |   |    |           |
| 20 |     |     |     |    |     |     |   |    |           |
| 24 |     |     |     |    |     |     |   |    |           |
| 25 |     |     |     |    |     |     |   |    |           |
| 30 | 45  | 54  | 49  | 25 | 100 | 125 | 5 | 15 | 15-30045- |
| 32 | 45  | 54  | 49  | 25 | 100 | 125 | 5 | 15 | 15-32045- |
| 38 | 54  | 63  | 58  | 30 | 100 | 130 | 5 | 18 | 15-38054- |
| 40 | 54  | 63  | 58  | 30 | 100 | 130 | 5 | 18 | 15-40054- |
| 48 | 65  | 75  | 70  | 35 | 100 | 135 | 5 | 18 | 15-48065- |
| 50 | 65  | 75  | 70  | 35 | 100 | 135 | 5 | 18 | 15-50065- |
| 63 | 81  | 93  | 88  | 48 | 100 | 148 | 5 | 18 | 15-63081- |
| 80 | 100 | 115 | 110 | 48 | 100 | 148 | 5 | 18 | 15-80100- |

## FLANGE SUPER LONGA



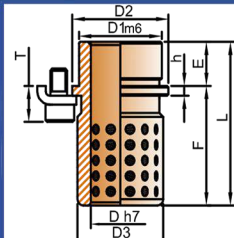
AÇO LIGADO

15-.....-40



INSERTO DE BRONZE

15-.....-43



BRONZE GRAFITADA

15-.....-46

TOLERÂNCIA PARA ØD - CLASSE DE FOLGA (aplicada em buchas de aço ligado e com inserto de bronze)

CLASSE DE FOLGA - 01 (H4)  
Para estampar chapas até 0,4mmCLASSE DE FOLGA - 02 (H6)  
Para estampar chapas acima de 0,4 até 3mmCLASSE DE FOLGA - 03 (H7)  
Para estampar chapas acima de 3mm

Grampos e parafusos acompanham o conjunto

| D        | L   | C    | X   | CODIGOS     |             |
|----------|-----|------|-----|-------------|-------------|
|          |     |      |     | Ø 24        | Ø 25        |
| 24<br>25 | 36  | 11,5 | 4,2 | 61-24036-01 | 61-25036-01 |
|          | 48  | 17,5 | 4,2 | 048-01      | 048-01      |
|          | 55  | 27   | 4,2 | 055-02      | 055-02      |
|          | 70  | 35   | 4,2 | 070-02      | 070-02      |
|          | 90  | 42   | 4,2 | 090-02      | 090-02      |
|          | 100 | 50   | 4,2 | 100-02      | 100-02      |
|          | 110 | 60   | 4,2 | 110-02      | 110-02      |

| D        | L   | C    | X   | CODIGO      |             |
|----------|-----|------|-----|-------------|-------------|
|          |     |      |     | Ø 30        | Ø 32        |
| 30<br>32 | 36  | 11,5 | 4,2 | 61-30036-01 | 61-32036-01 |
|          | 48  | 17,5 | 4,2 | 048-01      | 048-01      |
|          | 70  | 35   | 4,2 | 070-02      | 070-02      |
|          | 90  | 43   | 4,2 | 090-02      | 090-02      |
|          | 105 | 50   | 4,2 | 105-02      | 105-02      |
|          | 115 | 60   | 4,2 | 115-02      | 115-02      |
|          | 125 | 70   | 4,2 | 125-02      | 125-02      |
|          | 135 | 80   | 135 | 135-02      | 135-02      |

| D        | L   | C    | X   | CODIGO      |             |
|----------|-----|------|-----|-------------|-------------|
|          |     |      |     | Ø 38        | Ø 40        |
| 38<br>40 | 48  | 17,5 | 5,8 | 61-38048-01 | 61-40048-01 |
|          | 60  | 23,5 | 5,8 | 060-01      | 060-01      |
|          | 70  | 36   | 5,8 | 070-02      | 070-02      |
|          | 85  | 43   | 5,8 | 085-02      | 085-02      |
|          | 105 | 51   | 5,8 | 105-02      | 105-02      |
|          | 115 | 61   | 5,8 | 115-02      | 115-02      |
|          | 125 | 71   | 5,8 | 125-02      | 125-02      |
|          | 135 | 81   | 5,8 | 135-02      | 135-02      |
|          | 145 | 91   | 5,8 | 145-02      | 145-02      |
|          | 155 | 103  | 5,8 | 155-02      | 155-02      |

| D        | L   | C    | X | CODIGO      |             |
|----------|-----|------|---|-------------|-------------|
|          |     |      |   | Ø 48        | Ø 50        |
| 48<br>50 | 70  | 28,5 | 7 | 61-48070-01 | 61-50070-01 |
|          | 84  | 35,5 | 7 | 084-01      | 084-01      |
|          | 105 | 51   | 7 | 105-02      | 105-02      |
|          | 120 | 61   | 7 | 120-02      | 120-02      |
|          | 140 | 71   | 7 | 140-02      | 140-02      |
|          | 150 | 81   | 7 | 150-02      | 150-02      |
|          | 160 | 91   | 7 | 160-02      | 160-02      |
|          | 170 | 103  | 7 | 170-02      | 170-02      |
|          | 185 | 116  | 7 | 185-02      | 185-02      |
|          | 195 | 128  | 7 | 195-02      | 195-02      |

| D  | L   | C    | X | CODIGO      |  |
|----|-----|------|---|-------------|--|
|    |     |      |   | Ø 63        |  |
| 63 | 98  | 42,5 | 7 | 61-63098-01 |  |
|    | 145 | 72   | 7 | 145-02      |  |
|    | 165 | 82   | 7 | 165-02      |  |
|    | 180 | 92   | 7 | 180-02      |  |
|    | 190 | 105  | 7 | 190-02      |  |
|    | 205 | 117  | 7 | 205-02      |  |
|    | 215 | 130  | 7 | 215-02      |  |

| D  | L   | C    | X   | CODIGO      |  |
|----|-----|------|-----|-------------|--|
|    |     |      |     | Ø 80        |  |
| 80 | 98  | 42,5 | 8,5 | 61-80098-01 |  |
|    | 145 | 72   | 8,5 | 145-02      |  |
|    | 165 | 82   | 8,5 | 165-02      |  |
|    | 180 | 92   | 8,5 | 180-02      |  |
|    | 190 | 105  | 8,5 | 190-02      |  |
|    | 205 | 117  | 8,5 | 205-02      |  |
|    | 215 | 130  | 8,5 | 215-02      |  |

MATERIAL DA GAIOLA

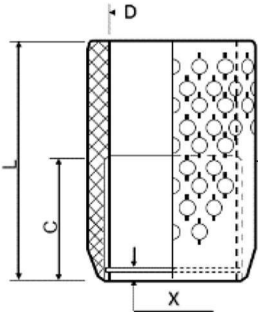
ALUMÍNIO

ESFERAS

| Ø DO PINO        | Ø DA ESFERA |
|------------------|-------------|
| DE 24mm ATÉ 40mm | 4,0mm       |
| DE 48mm ATÉ 80mm | 6,0 mm      |

COMO SOLICITAR  
61-DDLLL-01  
61-DDLLL-02

GPM - 1



UTILIZAÇÃO



CAMISA  
DESMONTÁVEL



CAMISA  
COLADA



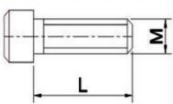
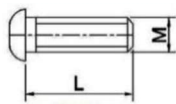
PINO DE GUIA  
REF.: 02



PINODE GUIA  
DESMONTÁVEL  
REF.: 06 – 07

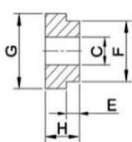
ACESSÓRIOS PARA CONJUNTOS GPM 1

| Ø PINO | PARAFUSOS |    |             | BUCHAS BP |   |    |    |    |            |            |
|--------|-----------|----|-------------|-----------|---|----|----|----|------------|------------|
|        | M         | L  | CÓDIGO      | BP        | h | E  | ØF | ØC | G          | CÓDIGO     |
| 24     | 6         | 20 | 73-06020-03 | BP1       | 6 | 3  | 15 | 7  | 18         | 21-1507-00 |
| 25     |           |    |             |           |   |    |    |    |            |            |
| 30     | 8         |    | 73-08020-03 | BP2       | 7 |    | 18 | 11 | 20         | 21-1809-00 |
| 32     |           |    |             |           |   |    |    |    |            |            |
| 38     | 10        | 25 | 73-10025-03 | BP3       |   | 13 | 26 | 30 | 21-1811-00 |            |
| 40     |           |    |             |           |   |    |    |    |            |            |
| 48     | 12        | 30 | 73-12030-03 | BP4       | 7 | 22 | 17 | 26 | 21-1813-00 |            |
| 50     |           |    |             |           |   |    |    |    |            |            |
| 63     | 16        | 35 | 73-16035-03 | BP5       |   |    | 22 | 17 | 26         | 21-2217-00 |
| 80     | 20        | 40 | 73-20040-03 | BP6       |   |    | 26 | 21 | 30         | 21-2621-00 |

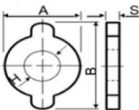


ATÉ Ø63mm

SOMENTE Ø80mm



| Ø PINO | ARRUELAS |    |    |      |     | ANÉIS ELÁSTICOS INTERNOS |    |      |         |
|--------|----------|----|----|------|-----|--------------------------|----|------|---------|
|        | AR       | ØA | B  | ØH   | S   | CÓDIGO                   | DN | D2   | CÓDIGO  |
| 24     | AR-2     | 23 | 28 | 15,5 | 2,3 | 19-2328-00               | 24 | 26,5 | 502-024 |
| 25     |          |    |    |      |     |                          | 25 | 27,2 | 502-025 |
| 30     | AR-3     | 29 | 34 | 18,5 | 2,3 | 19-2934-00               | 30 | 32,7 | 502-030 |
| 32     |          |    |    |      |     |                          | 32 | 34,7 | 502-032 |
| 38     | AR-5     | 37 | 42 | 18,5 | 2,3 | 19-3742-00               | 38 | 41   | 502-038 |
| 40     |          |    |    |      |     |                          | 40 | 43,5 | 502-040 |
| 48     | AR-7     | 47 | 52 | 18,5 | 2,3 | 19-4752-00               | 48 | 53   | 502-048 |
| 50     |          |    |    |      |     |                          | 50 | 54   | 502-050 |
| 63     | AR-9     | 62 | 67 | 23   | 2,3 | 19-6267-00               | 63 | 68   | 502-063 |
| 80     |          |    |    |      |     |                          | 80 | 85   | 502-083 |



| D        | L   | CODIGO      |             |
|----------|-----|-------------|-------------|
|          |     | Ø 24        | Ø 25        |
| 24<br>25 | 40  | 61-24040-03 | 61-25040-03 |
|          | 52  | 052-03      | 052-03      |
|          | 63  | 063-03      | 063-03      |
|          | 80  | 080-03      | 080-03      |
| D        | L   | CODIGO      |             |
|          |     | Ø 30        | Ø 32        |
| 30<br>32 | 40  | 61-30040-03 | 61-32040-03 |
|          | 52  | 52-03       | 52-03       |
|          | 63  | 63-03       | 63-03       |
|          | 80  | 80-03       | 80-03       |
|          | 100 | 100-03      | 100-03      |
| D        | L   | CODIGO      |             |
|          |     | Ø 38        | Ø 40        |
| 38<br>40 | 52  | 61-38052-03 | 61-40052-03 |
|          | 63  | 63-03       | 63-03       |
|          | 80  | 80-03       | 80-03       |
|          | 100 | 100-03      | 100-03      |
|          | 125 | 125-03      | 125-03      |
| D        | L   | CODIGO      |             |
|          |     | Ø 48        | Ø 50        |
| 48<br>50 | 63  | 61-48063-03 | 61-50063-03 |
|          | 80  | 80-03       | 80-03       |
|          | 100 | 100-03      | 100-03      |
|          | 125 | 125-03      | 125-03      |
| D        | L   | CODIGO      |             |
|          |     |             | Ø 63        |
| 63       | 100 |             | 61-63100-03 |
|          | 125 |             | 125-03      |
| D        | L   | CODIGO      |             |
|          |     |             | Ø80         |
| 80       | 125 |             | 61-80125-03 |
|          | 140 |             | 140-03      |

MATERIAL DA GAIOLA

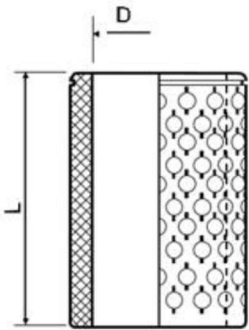
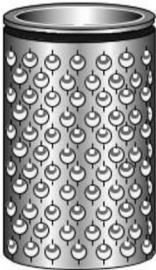
ALUMÍNIO

ESFERAS

| Ø DO PINO        | Ø DA ESFERA |
|------------------|-------------|
| DE 24mm ATÉ 40mm | 4,0mm       |
| DE 48mm ATÉ 80mm | 6,0 mm      |

COMO SOLICITAR  
61-DDLLL-03

GPM - 2



UTILIZAÇÃO



PINO DE GUIA  
DESMONTÁVEL



PINO DE GUIA  
LISO



CAMISA COLADA



CAMISA DESMONTÁVEL

ANEL ELÁSTICO  
EXTERNO

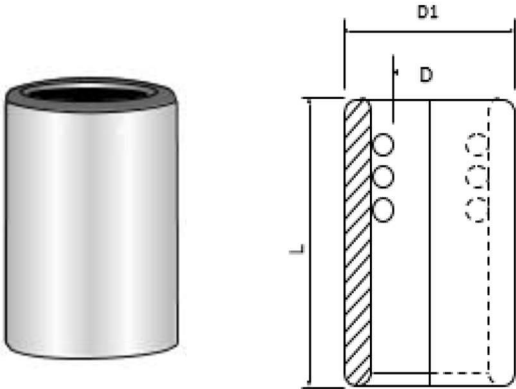


| Ø PINO | DN | DZ   | CÓDIGO  |
|--------|----|------|---------|
| 24     | 32 | 30,3 | 501 032 |
| 25     |    |      |         |
| 30     | 38 | 36,0 | 501 038 |
| 32     | 40 | 37,5 | 501 040 |
| 38     | 45 | 42,5 | 501 045 |
| 40     | 48 | 45,5 | 501 048 |
| 48     | 60 | 57   | 501 060 |
| 50     | 62 | 59,0 | 501 062 |
| 63     | 75 | 72,0 | 501 075 |
| 80     | 92 | 89   | 501 092 |

| D        | D1  | L   | CÓDIGO      |             |
|----------|-----|-----|-------------|-------------|
|          |     |     | Ø 24        | Ø 25        |
| 24<br>25 | 45  | 65  | 17-24065-45 | 17-25065-45 |
|          |     | 80  | 080-45      | 080-45      |
|          |     | 95  | 095-45      | 095-45      |
|          |     | 110 | 110-45      | 110-45      |
|          |     | 130 | 130-45      | 130-45      |
| D        | D1  | L   | CÓDIGO      |             |
|          |     |     | Ø 30        | Ø 32        |
| 30<br>32 | 54  | 80  | 17-30080-45 | 17-32080-45 |
|          |     | 95  | 095-45      | 095-45      |
|          |     | 110 | 110-45      | 110-45      |
|          |     | 130 | 130-45      | 130-45      |
|          |     | 150 | 150-45      | 150-45      |
|          |     | 170 | 170-45      | 170-45      |
| D        | D1  | L   | CÓDIGO      |             |
|          |     |     | Ø 38        | Ø 40        |
| 38<br>40 | 65  | 80  | 17-38080-45 | 17-40080-45 |
|          |     | 95  | 095-45      | 095-45      |
|          |     | 110 | 110-45      | 110-45      |
|          |     | 130 | 130-45      | 130-45      |
|          |     | 150 | 150-45      | 150-45      |
|          |     | 170 | 170-45      | 170-45      |
|          |     | 190 | 190-45      | 190-45      |
|          |     | 215 | 215-45      | 215-45      |
| D        | D1  | L   | CÓDIGO      |             |
|          |     |     | Ø 48        | Ø 50        |
| 48<br>50 | 81  | 110 | 17-48110-45 | 17-50110-45 |
|          |     | 130 | 130-45      | 130-45      |
|          |     | 150 | 150-45      | 150-45      |
|          |     | 170 | 170-45      | 170-45      |
|          |     | 190 | 190-45      | 190-45      |
|          |     | 215 | 215-45      | 215-45      |
|          |     | 240 | 240-45      | 240-45      |
|          |     | 265 | 265-45      | 265-45      |
| D        | D1  | L   | CÓDIGO      |             |
|          |     |     |             | Ø 63        |
| 63       | 95  | 150 |             | 17-63150-45 |
|          |     | 170 |             | 170-45      |
|          |     | 190 |             | 190-45      |
|          |     | 215 |             | 215-45      |
|          |     | 240 |             | 240-45      |
|          |     | 265 |             | 265-45      |
| D        | D1  | L   | CÓDIGO      |             |
|          |     |     |             | Ø 80        |
| 80       | 112 | 150 |             | 17-80150-45 |
|          |     | 170 |             | 170-45      |
|          |     | 190 |             | 190-45      |
|          |     | 215 |             | 215-45      |
|          |     | 240 |             | 240-45      |
|          |     | 265 |             | 265-45      |

|                                                      |
|------------------------------------------------------|
| <p><b>MATERIAL</b></p> <p>AÇO LIGADO</p>             |
| <p><b>CEMENTADO / TEMPERADO</b></p> <p>60-64 HRC</p> |
| <p><b>COMO SOLICITAR</b></p> <p>17-DDLLL-45</p>      |

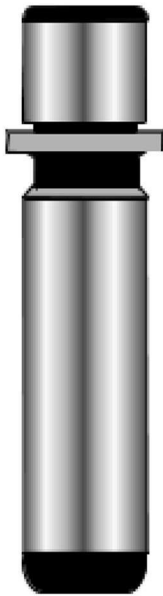
CAMISA COLADA



UTILIZAÇÃO



PINO LISO



PINO DESMONTÁVEL



GPM-1



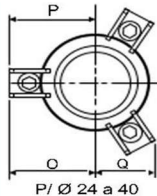
GPM-2

| D        | D1  | D2  | D3  | E   | F   | CÓDIGO      |             |
|----------|-----|-----|-----|-----|-----|-------------|-------------|
|          |     |     |     |     |     | Ø 24        | Ø 25        |
| 24<br>25 | 45  | 54  | 43  | 20  | 10  | 16-24020-52 | 16-25020-52 |
|          |     |     |     | 25  | 10  | 025-52      | 025-52      |
|          |     |     | 49  | 35  |     | 16-24035-50 | 16-25035-50 |
|          |     |     |     | 30  | 50  | 050-50      | 050-50      |
|          |     |     |     | 65  |     | 065-50      | 065-50      |
| D        | D1  | D2  | D3  | E   | F   | CÓDIGO      |             |
|          |     |     |     |     |     | Ø 30        | Ø 32        |
| 30<br>32 | 54  | 63  | 50  | 20  | 10  | 16-30020-52 | 16-32020-52 |
|          |     |     |     | 25  | 10  | 025-52      | 025-52      |
|          |     |     |     | 29  | 10  | 029-52      | 029-52      |
|          |     |     |     | 32  | 10  | 036-52      | 036-52      |
|          |     |     | 58  | 50  |     | 16-30050-50 | 16-32050-50 |
|          |     |     |     | 30  | 65  | 065-50      | 065-50      |
|          |     |     |     | 80  |     | 080-50      | 080-50      |
| D        | D1  | D2  | D3  | E   | F   | CÓDIGO      |             |
|          |     |     |     |     |     | Ø 38        | Ø 40        |
| 38<br>40 | 65  | 75  | 64  | 29  | 10  | 16-38029-52 | 16-40029-52 |
|          |     |     |     | 32  | 10  | 032-52      | 032-52      |
|          |     |     |     | 36  | 10  | 036-52      | 036-52      |
|          |     |     |     | 44  | 10  | 044-52      | 044-52      |
|          |     |     | 70  | 50  |     | 16-38050-50 | 16-40050-50 |
|          |     |     |     | 30  | 65  | 065-50      | 065-50      |
|          |     |     |     | 80  |     | 080-50      | 080-50      |
| 48<br>50 | 81  | 93  | 79  | 36  | 10  | 16-48036-52 | 16-50036-52 |
|          |     |     |     | 44  | 10  | 044-52      | 044-52      |
|          |     |     |     | 65  |     | 16-48065-50 | 16-50065-50 |
|          |     |     |     | 80  |     | 080-50      | 080-50      |
|          |     |     | 88  | 50  | 100 | 100-50      | 100-50      |
|          |     |     |     | 100 |     | 100-50      | 100-50      |
|          |     |     |     | 120 |     | 120-50      | 120-50      |
| D        | D1  | D2  | D3  | E   | F   | CÓDIGO      |             |
|          |     |     |     |     |     |             | Ø 63        |
| 63       | 95  | 106 | 103 | 50  | 100 |             | 16-63100-50 |
|          |     |     |     |     | 120 |             | 120-50      |
|          |     |     |     |     | 140 |             | 140-50      |
| D        | D1  | D2  | D3  | E   | F   | CÓDIGO      |             |
|          |     |     |     |     |     |             | Ø 80        |
| 80       | 112 | 125 | 120 | 50  | 100 |             | 16-80100-50 |
|          |     |     |     |     | 120 |             | 120-50      |
|          |     |     |     |     | 140 |             | 140-50      |

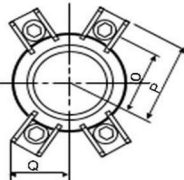
MATERIAL  
AÇO LIGADO

CEMENTADO / TEMPERADO  
60/64 HRC

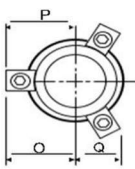
COMO SOLICITAR  
16-DDLLL-45



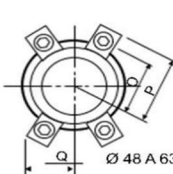
P/ Ø 24 a 40



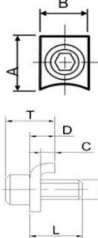
P/ Ø 48 a 50



P/ Ø 24 a 40

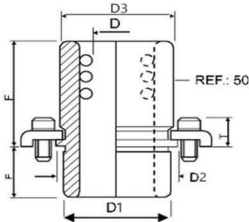
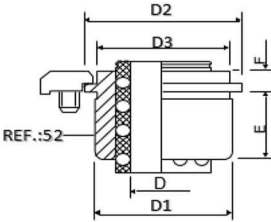


P/ Ø 48 a 80



EXTRA CURTA

PARA UTILIZAÇÃO EM  
PLACA INTERMEDIÁRIA



UTILIZAÇÃO



PINO LISO



PINO DESMONTÁVEL



GPM1



GPM2

GRAMPOS

| D     | RAIOS |    | Q  | Qt<br>PINO | A  | B  | C | D  | T  | CÓDIGO  |
|-------|-------|----|----|------------|----|----|---|----|----|---------|
|       | O     | P  |    |            |    |    |   |    |    |         |
| 24/25 | 31    | 39 | 27 | 3          | 17 | 16 | 5 | 10 | 16 | 1812-01 |
| 30/32 | 36    | 46 | 30 | 3          | 19 | 16 | 6 | 10 | 19 | 1816-01 |
| 38/40 | 42    | 52 | 33 | 4          | 19 | 16 | 6 | 11 | 19 | 1816-01 |
| 48/50 | 51    | 61 | 37 | 4          | 19 | 16 | 6 | 11 | 19 | 1816-01 |
| 63    | 58    | 68 | 41 | 4          | 19 | 16 | 6 | 11 | 19 | 1816-01 |
| 80    | 68    | 79 | 46 | 4          | 19 | 16 | 6 | 11 | 19 | 1816-01 |

GRAMPOS P/ EXTRA CURTA

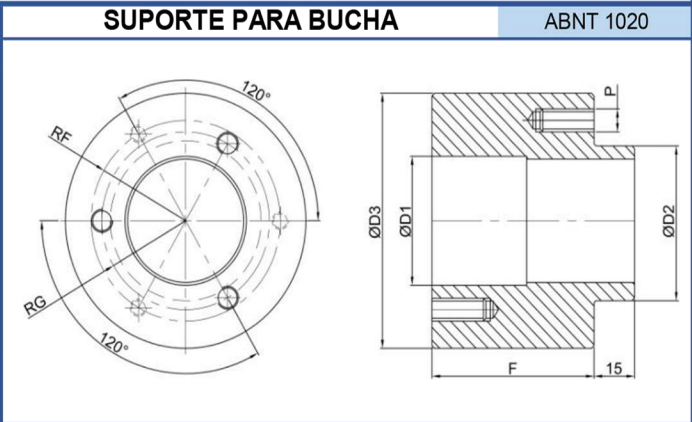
| D     | RAIOS |    | Q  | Qt<br>PINO | A  | B    | C   | D  | CÓDIGO  |
|-------|-------|----|----|------------|----|------|-----|----|---------|
|       | O     | P  |    |            |    |      |     |    |         |
| 24/25 | 33    | 41 | 27 | 3          | 17 | 14,5 | 4,5 | 10 | 1822-01 |
| 30/32 | 39    | 49 | 32 | 3          | 17 | 14,5 | 4,5 | 10 | 1822-01 |
| 38/40 | 45    | 55 | 35 | 3          | 21 | 17   | 5,5 | 11 | 1824-01 |
| 48/50 | 54    | 64 | 39 | 4          | 21 | 17   | 5,5 | 11 | 1824-01 |

PARAFUSOS

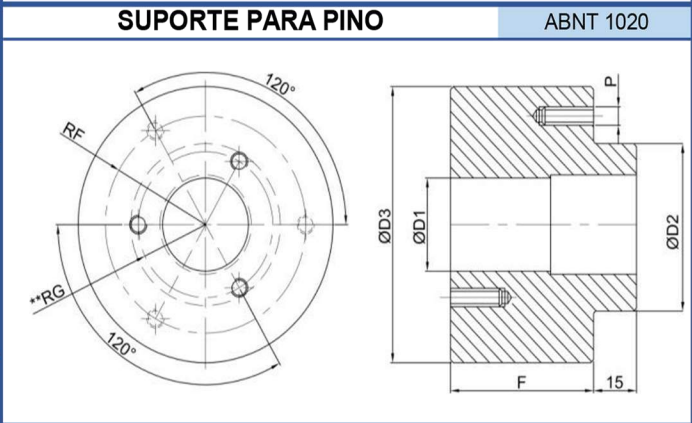
| D     | R | L  | CÓDIGO      |
|-------|---|----|-------------|
| 24/25 | 6 | 20 | 73-06020-02 |
| 30/32 | 6 | 20 | 73-06020-02 |
| 38/40 | 8 | 20 | 73-08020-02 |
| 48/50 | 8 | 20 | 73-08020-02 |
| 63    | 8 | 20 | 73-08020-02 |
| 80    | 8 | 20 | 73-08020-02 |

SUPORTE DESMONTÁVEL REDONDO

| ESPECIFICAÇÕES |     |     |     |       |    |            |     |
|----------------|-----|-----|-----|-------|----|------------|-----|
| PINO           | ØD1 | ØD2 | ØD3 | RF    | RG | F          | P   |
| 30/32          | 45  | 54  | 89  | 35,75 | 31 | 40<br>50   | M6  |
| 38/40          | 54  | 65  | 102 | 41,75 | 36 | 63<br>80   | M8  |
| 48/50          | 65  | 81  | 114 | 48,75 | 42 | 80<br>100  |     |
| 63             | 81  | 100 | 140 | 60    | 51 | 100<br>125 |     |
| 80             | 100 | 118 | 165 | 70,75 | 63 | 125        | M10 |

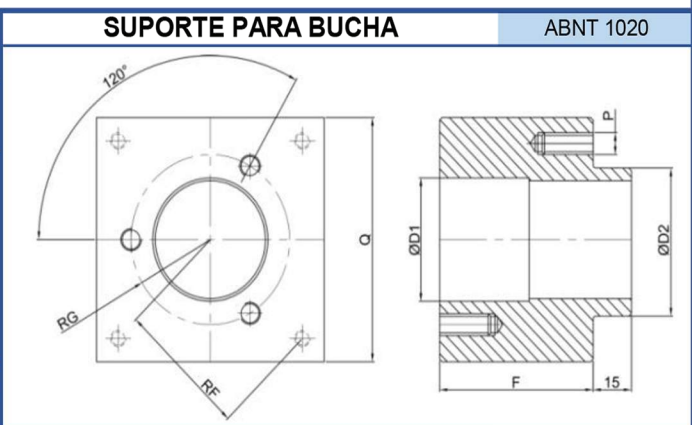


| ESPECIFICAÇÕES |     |     |       |      |            |     |
|----------------|-----|-----|-------|------|------------|-----|
| ØD1            | ØD2 | ØD3 | RF    | **RG | F          | P   |
| 30/32          | 54  | 89  | 35,75 | 23,5 | 40<br>50   | M6  |
| 38/40          | 65  | 102 | 41,75 | 28,5 | 63<br>80   | M8  |
| 48/50          | 81  | 114 | 48,75 | 36   | 80<br>100  |     |
| 63             | 100 | 140 | 60    | 42,5 | 100<br>125 |     |
| 80             | 118 | 165 | 70,75 | 51   | 125        | M10 |

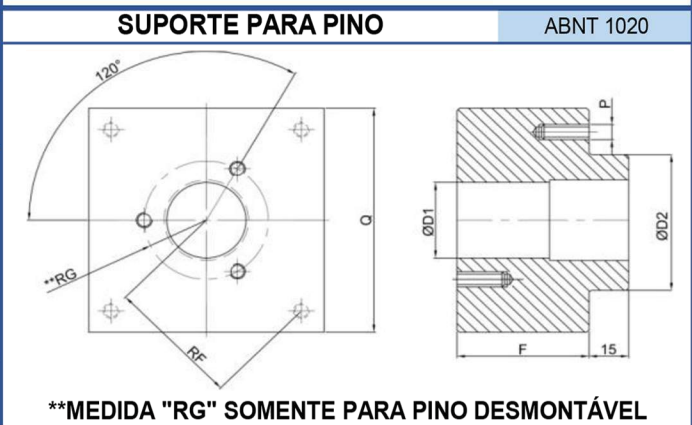


SUPORTE DESMONTÁVEL QUADRADO

| ESPECIFICAÇÕES |     |     |     |       |    |            |     |
|----------------|-----|-----|-----|-------|----|------------|-----|
| PINO           | ØD1 | ØD2 | Q   | RF    | RG | F          | P   |
| 30/32          | 45  | 54  | 89  | 48,79 | 31 | 40<br>50   | M6  |
| 38/40          | 54  | 65  | 102 | 55,15 | 36 | 63<br>80   | M8  |
| 48/50          | 65  | 81  | 114 | 59,40 | 42 | 80<br>100  |     |
| 63             | 81  | 100 | 140 | 77,78 | 51 | 100<br>125 |     |
| 80             | 100 | 118 | 165 | 88,39 | 63 | 125        | M10 |



| ESPECIFICAÇÕES |     |     |       |      |            |     |
|----------------|-----|-----|-------|------|------------|-----|
| ØD1            | ØD2 | Q   | RF    | **RG | F          | P   |
| 30/32          | 54  | 89  | 48,79 | 23,5 | 40<br>50   | M6  |
| 38/40          | 65  | 102 | 55,15 | 28,5 | 63<br>80   | M8  |
| 48/50          | 81  | 114 | 59,4  | 36   | 80<br>100  |     |
| 63             | 100 | 140 | 77,78 | 42,5 | 100<br>125 |     |
| 80             | 118 | 165 | 88,39 | 51   | 125        | M10 |



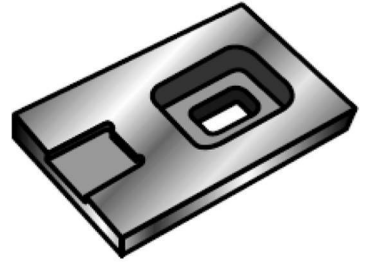
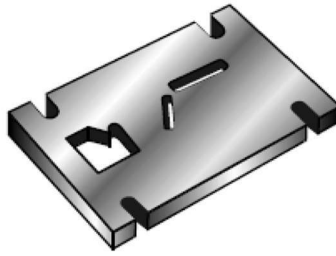
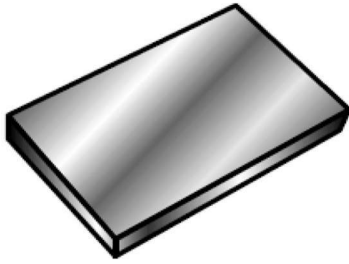
\*\*MEDIDA "RG" SOMENTE PARA PINO DESMONTÁVEL

OBS.:

RF = RAO DE FURAÇÃO DOS PARAFUSOS

RG = RAO DE FURAÇÃO DOS GRAMPIS

COMO SOLICITAR: D3 X D1 X F



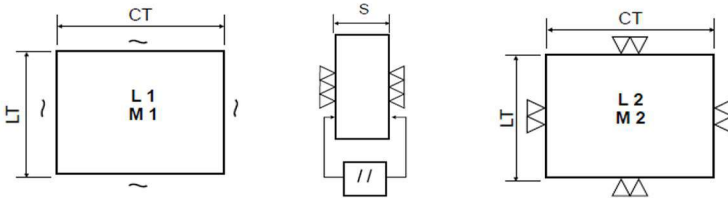
### APLICAÇÕES:

Máquinas, Equipamentos, Dispositivos, Ferramentaria, Manutenção, Estampos, Moldes.

### ACABAMENTO:

|           |                                                               |           |                                                                                                      |
|-----------|---------------------------------------------------------------|-----------|------------------------------------------------------------------------------------------------------|
| <b>L1</b> | Laterais oxicortadas.<br>Superfícies limpas em blanchard.     | <b>M1</b> | Laterais oxicortadas.<br>Superfície com espessuras determinadas blanchard blanchadas                 |
| <b>L2</b> | Laterais Limpas em blanchard. Superfície limpas em blanchard. | <b>M2</b> | Laterais com dimensões determinadas frezadas.<br>Superfícies com espessuras determinadas blanchadas. |

### TOLERÂNCIAS



### AÇOS

|           |    |
|-----------|----|
| ABNT 1020 | 02 |
| ABNT 1045 | 01 |

|                  |                                                 |
|------------------|-------------------------------------------------|
| <b>L 1 / L 2</b> | $S \pm 1$                                       |
| <b>L 1 / M1</b>  | $CT \pm 1 / 300$<br>$LT \pm 1 / 300$            |
| <b>L 1 / L 2</b> | $// 0,010 / 100$                                |
| <b>M1 / M2</b>   | PLANICIDADE 0,010 / 100                         |
| <b>M1 e M2</b>   | $S \pm 0,4 / 200$                               |
| <b>L 2 / M2</b>  | $\alpha = 0,025 / 100$<br>$\beta = 0,025 / 200$ |

#### Tolerância de Superfície (mm)

| Paralelismo | Empenamento | Espessuras  |
|-------------|-------------|-------------|
| 0,010 / 10  | 0,020 / 300 | -0 / + 0,20 |

Tolerância válidas para relação:  
Diagonal / Espessura < 30mm  
Placas S3 espessuras -0 / +0,05

#### Tolerância das Laterais (mm)

| CT e LT     | $\alpha$ e $\beta$ Para Placas |
|-------------|--------------------------------|
| 0,200 / 300 | 0,025 / 100                    |

**DIAGONAL SUPERIOR A 1200mm: SUPERFÍCIES FREZADAS. PODEMOS FORNECER PLACAS COM TOLERÂNCIAS DIFERENTES DAS INDICADAS.**

#### PLACAS COM RECORTES OXICORTADOS POR FOTOCÉLULA TOLERÂNCIAS PARA RECORTES

| S        | Dimensões do recorte | Posição do recorte | Largura mínima |
|----------|----------------------|--------------------|----------------|
| até 49   | $\pm 1$              | $\pm 1$            | 10             |
| 49 a 73  | $\pm 3$              | $\pm 3$            | 20             |
| acima 73 | $\pm 3$              | $\pm 3$            | 20             |

#### ESPESSURAS RECOMENDADAS

##### PARA ABNT 1020:

10 - 14 - 17 - 20 - 24 - 30 - 36 - 43 - 49 - 55 - 61 - 73 - 87 - 98 - 110 - 124 - 148

##### PARA ABNT 1045:

10 - 14 - 17 - 20 - 24 - 27 - 30 - 36 - 43 - 49 - 55 - 61 - 73 - 87 - 98 - 110 - 124 - 148 - 174 - 198 - 224 - 248 - 295

### COMO ENCOMENDAR:

CT - Comprimento total x LT - Largura total

ESPESSURA: Especificar

AÇO - ABNT 1020 / ABNT 1045 / ou outros

ACABAMENTO: L1 / L2 / M1 ou M2

### PRESTAÇÃO DE SERVIÇOS:

Retífica Blanchard, Tangencial, Usinagem em CNC, parceria em terceirização utilizando nossas matérias primas ou matérias primas fornecidas pelo cliente.