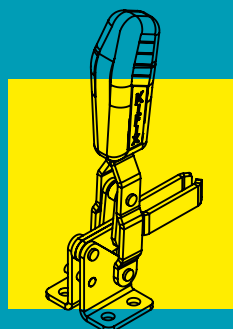


CATÁLOGO

LOGGO

PRODUTOS 21/22



Kifix[®]
GRAMPOS DE FIXAÇÃO

DESDE 2004

A KIFIX

Sediada no estado do Rio Grande do Sul, na cidade de Caxias do Sul, fabricando grampos de fixação rápida desde 2004, coloca a sua disposição mais de 600 produtos da mais alta qualidade, direcionado aos mais variados ramos de atividades industriais, tais como: ferramentarias, serralherias, indústrias metalúrgicas, moveleiras, químicas, cosméticas, alimentícias, automobilísticas, autopeças, etc.

Conta com profissionais experientes e que estão a sua disposição para ajudá-lo a solucionar os seus problemas de fixação.

O sistema de fixação, chamado de “fixação rápida” é uma ferramenta que pode ser acionada de forma manual, pneumática, hidráulica ou elétrica. Foi fabricada pela primeira vez em 1936, e desde então vem solucionando problemas de fixação em processos industriais tais como: furar, rosquear, soldar, colar, montar, fresar e etc.

Os grampos de “fixação rápida” são fabricados nos tipos vertical, horizontal, tensor, torpedo e alicate em aço carbono zincado ou aço inox, com capacidade de retenção de 30 a 3.400kgf força. Tamanhos e tipos especiais são fabricados sob encomenda.



pag **06** Grampos verticais

KF-718
KF-631
KF 010 / KF-012 / KF-017 / KF-018 / KF-016 / KF-011 / KF-111
KF-017 T
KF-010F / KF-012F / KF-019 / KF-211 / KF-311 / KF-411
KF-615 / KF-616 / KF-641 / KF-066 / KF-845 / KF-875
KF-017 DS A / KF-011 DS A / KF-011 DS A JD / KF-111 DS A
KF-211 DS A / KF-311 DS A / KF-411 DS A
KF-MP / KF-JD
KF-725 / KF-825
KFU

pag **16** Grampos horizontais

KF-105 / KF-106 / KF-107 / KF-152 / KF-732 / KF-511 / KF-512 / KF-521 / KF-522 / KF-532 / KF-534
KF-106 F / KF-107 F / KF-152 F / KF-312 F / KF-522 F / KF-531 F
KF-531 / KF-541 / KF-312 / KF-712 / KF-523 / KF-722 / KF-533
KF-102 / KF-101 / KF-103 / KF-104 / KF-515

pag **22** Grampos tensores

KF-310 / KF-314 / KF-326 / KF-320
KF-233 / KF-643 / KF-743 / KF-133 / KF-843 / KF-943 / KF-143
KF-033 / KF-353 / KF-153 / KF-453 / KF-553
KF-063 / KF-163 / KF-263 / KF-423 / KF-433 / KF-443 / TKF-473
KF-330 / KF-350 / KF-340 / KF-375 / KF-385
KFC3 / KF5C

pag **28** Grampos tensores com cinta

KF-233 CT / KF-743 CT / KF-843 CT

pag **29** Grampos torpedos

KF-305 / KF-405 / KF-505 / KF-605
KF-061 / KF-057 / KF-051 / KF-054 / KF-053 / KF-052 / KF-056

pag **31** Grampos torpedos com alça

KF-052 AL / KF-054 AL / KF-057 AL

pag **32** Grampo torpedo com giro

KF-007 G

pag **33** Grampos torpedos frontais

KF-005 / KF-006 / KF-007 / KF-009 / KF-015 / KF-025 / KF-035
BASES "L" PARA TORPEDOS

pag **34** Grampo torpedo com haste quadrada

KFKT-012

pag **35** Fusos rápidos

KFRL / KFRF

pag **35** Manípulos

KFM-6 / KFM-8 / KFM-10 / KFM12 / KFM-16

pag **36** Grampos sargentos

KFS-150 / KFS-300

pag **36** Grampos compressores

KF-035 34 / KF-035 60 / KF-035 3660 / KF-035 100

pag **37** Grampos pneumáticos

KF-012 P / KF-017 P / KF-011 P / KF-111 P

KF-057 P / KF-052 P / KF-066 P

KF-019 P / KF-311 P / KF-411 P

KF-718 P

pag **40** Grampos pneumáticos pesados

KFP-L40 / KFP-L63

pag **41** Dobradiças e trincos

KFD-14 / KFD 19

KFT-10 / KFT-14

pag **41** Alicates

KFA-300

KF-325 / KFA-25 / KFA-35 / KFA-45 / KFA-70 / KFA-90 / KFA-100 / KFA-150

pag **43** Alça

KF-AL

pag **43** Ponteiras

PC / PF

PP / PS / PSB / PA / ARP / ARB / PB / BRP / BRB / BAP / PBC / BRPC

PSD / PBD

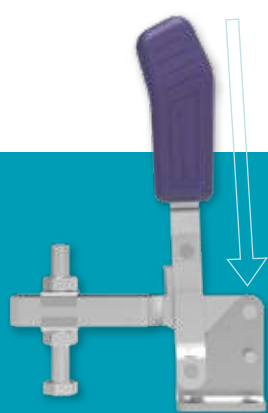
MECANISMO

O sistema de fixação rápida recebeu denominações variadas através do tempo, por exemplo: presilha, prensa manual, fixador, grampo (CLAMP USA).

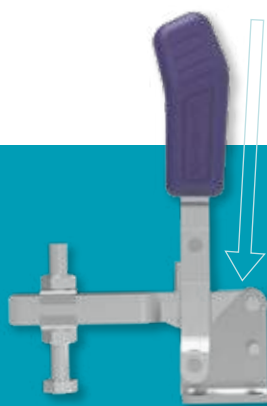
Sua origem deu-se nos Estados Unidos da América em 1936.

Esse mecanismo consiste em uma articulação de três pontos conhecida como “ação de joelho ou cotovelo”, a qual proporciona um travamento mecânico (veja na figura abaixo) que gera uma força de retenção contrária ao esforço aplicado e que só se destrava se acionado propositalmente.

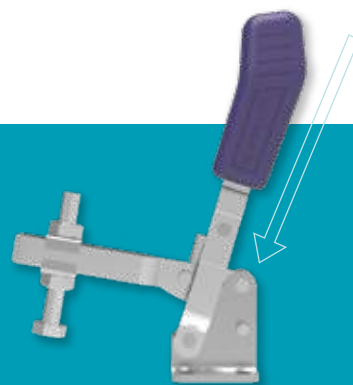
Para evitar o destravamento aleatório, disponibilizamos também grampos de fixação rápida com trava de segurança.



TRAVADO
Posição de trava



SEMI TRAVADO
Posição central



DESTRAVADO
Antes da
posição central

FORÇA DE RETENÇÃO

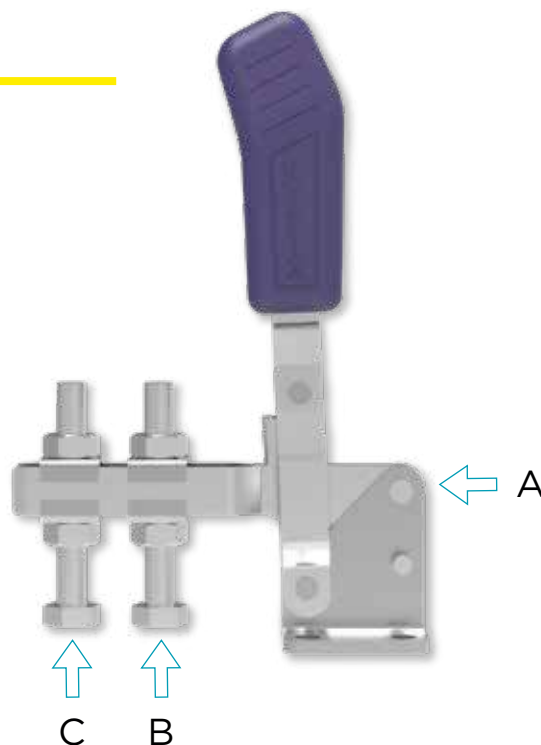
A força de retenção é proporcional a distância do ponto de giro (A) ao ponto de fixação da ponteira (B/C).

Quanto maior a distância entre o ponto A e o ponto de fixação da ponteira, menor será a força de retenção do fixador.

A força de retenção é proporcional a distância do ponto de giro (A) ao ponto de fixação da ponteira (B).

Distancia AC: 135mm (especificado no catálogo) = 680 Kgf.

Distancia AB: 90mm ($680 \times AC / AB = 680 \times 135 / 90 = 1.020$ kgf).



CORES DOS CABOS

Possuímos opções de cores para os cabos dos grampos, azul (cor padrão) preto, vermelho, laranja e verde. E para os cabos modelo alça possuímos as cores azul (padrão), preto e vermelho.



Azul (padrão)



Preto



Vermelho



Laranja



Verde



Preto



Vermelho



Azul (padrão)

PROJETOS ESPECIAIS

Trabalhamos com o desenvolvimento de novos projetos ou adaptação de produtos existentes, conforme a necessidade do cliente, podendo elaborar algo específico para cada negócio.

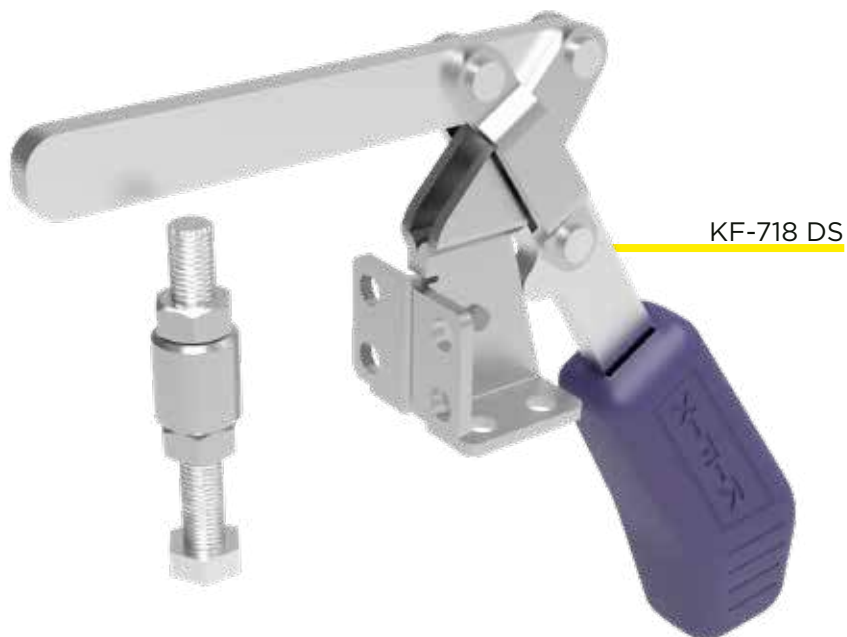


KF-011 DS A

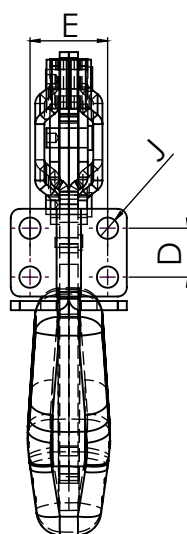
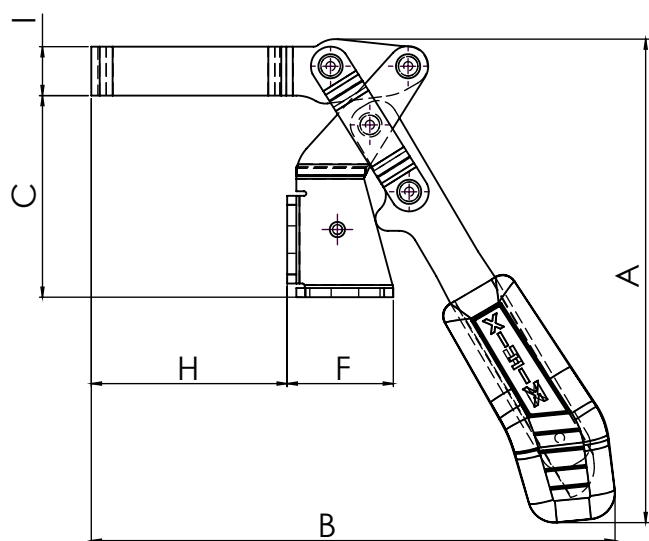
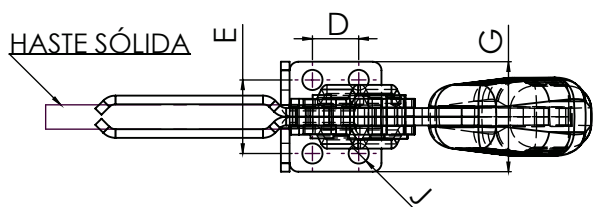
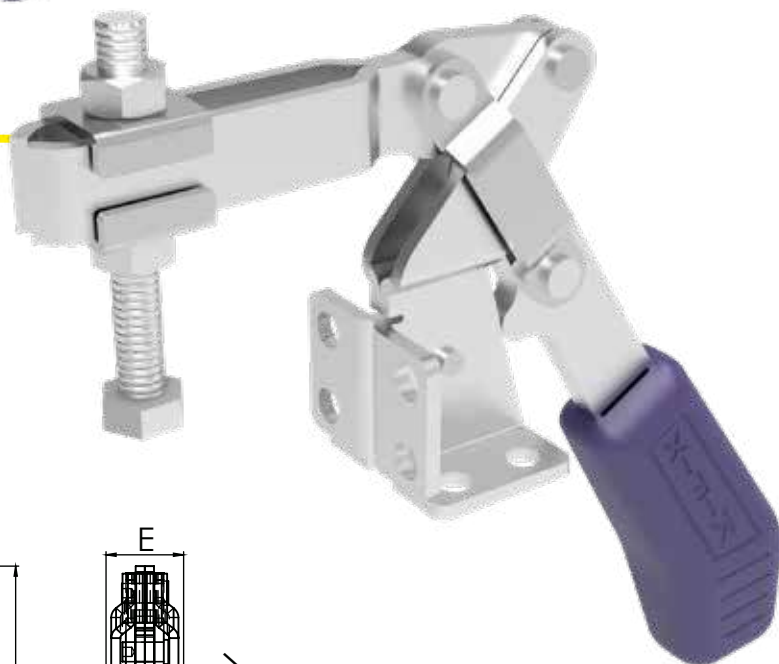


Adaptação
KF-011 DS A JD

GRAMPOS VERTICAIS



KF-718 DB



BASES
 D - Dobrada
 R - Reta

HASTES
 B - Bifurcada
 S - Sólida

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | I | J | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|-------|-------|----|----|------|----|----|----|----|---|--------------------|---------|
| KF-718 DB | 170 | 158,3 | 171,5 | 66 | 16 | 25,4 | 35 | 38 | 64 | 16 | 7 | 185 | 0,5 |
| KF-718 DS | 170 | 170,6 | 198,3 | 66 | 16 | 25,4 | 35 | 38 | 82 | 16 | 7 | 185 | 0,52 |

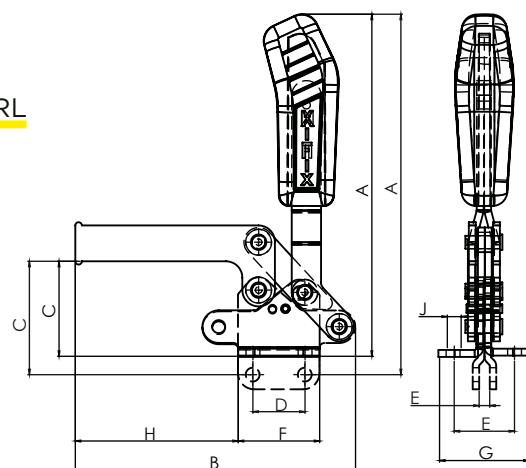
GRAMPOS VERTICAIS



KF-631 DI TR



KF-631 RL



| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|---------------|-----------------------|-----|-----|----|----|-----|----|----|-----|-----|--------------------|---------|
| KF-631 D | 400 | 189 | 129 | 28 | 32 | 37 | 50 | 55 | 57 | 8,5 | 85 | 0,92 |
| KF-631 D TR | 400 | 204 | 129 | 28 | 32 | 37 | 50 | 55 | 57 | 8,5 | 85 | 1,05 |
| KF-631 DI | 400 | 189 | 129 | 56 | 32 | 37 | 50 | 55 | 57 | 8,5 | 85 | 0,92 |
| KF-631 DI TR | 400 | 204 | 129 | 56 | 32 | 37 | 50 | 55 | 57 | 8,5 | 85 | 1,05 |
| KF-631 R | 400 | 201 | 129 | 40 | 32 | 6,5 | 50 | | 57 | 8,5 | 85 | 0,92 |
| KF-631 R TR | 400 | 216 | 129 | 40 | 32 | 6,5 | 50 | | 57 | 8,5 | 85 | 1,05 |
| KF-631 RI | 400 | 201 | 129 | 68 | 32 | 6,5 | 50 | | 57 | 8,5 | 85 | 0,92 |
| KF-631 RI TR | 400 | 216 | 129 | 68 | 32 | 6,5 | 50 | | 57 | 8,5 | 85 | 1,05 |
| KF-631 DL | 300 | 189 | 172 | 28 | 32 | 37 | 50 | 55 | 100 | 8,5 | 85 | 0,98 |
| KF-631 DL TR | 300 | 204 | 172 | 28 | 32 | 37 | 50 | 55 | 100 | 8,5 | 85 | 1,11 |
| KF-631 DIL | 300 | 189 | 172 | 56 | 32 | 37 | 50 | 55 | 100 | 8,5 | 85 | 0,98 |
| KF-631 DIL TR | 300 | 204 | 172 | 56 | 32 | 37 | 50 | 55 | 100 | 8,5 | 85 | 1,11 |
| KF-631 RL | 300 | 201 | 172 | 40 | 32 | 6,5 | 50 | | 100 | 8,5 | 85 | 0,98 |
| KF-631 RL TR | 300 | 216 | 172 | 40 | 32 | 6,5 | 50 | | 100 | 8,5 | 85 | 1,11 |
| KF-631 RIL | 300 | 201 | 172 | 68 | 32 | 6,5 | 50 | | 100 | 8,5 | 85 | 0,98 |
| KF-631 RIL TR | 300 | 216 | 172 | 68 | 32 | 6,5 | 50 | | 100 | 8,5 | 85 | 1,11 |



KF-016 RS



KF-018 DB TR



KF-017 DBL

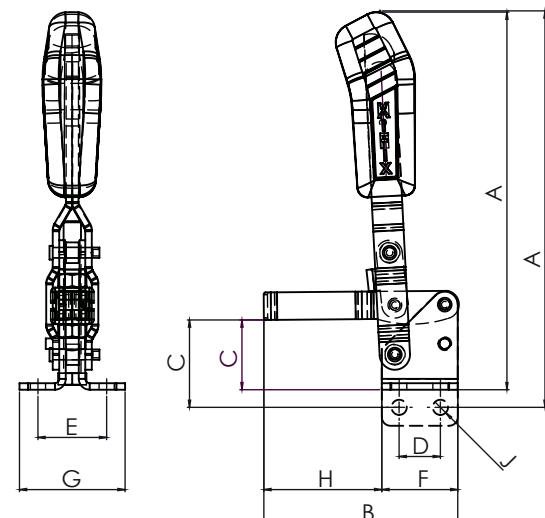
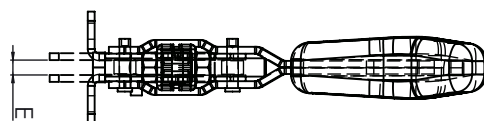


KF-111 RBL

BASES
D - Dobrada
R - Reta

HASTES
B - Bifurcada
S - Sólida
L - Longa
I - Invertida

TR - Trava



GRAMPOS VERTICAIS



KF-011 DB TR



KF-012 RB



KF-111DBL

BASES
D - Dobrada
R - Reta

HASTES
B - Bifurcada
S - Sólida
L - Longa

TR - Trava

| REFERÊNCIA | FORÇA RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|---------------|--------------------|-----|-------|------|------|------|------|------|-------|-----|--------------------|---------|
| KF-010 DB | 32 | 86 | 51,3 | 16 | 16 | 23,9 | 25,4 | 33,3 | 25,9 | 4,3 | 100 | 0,090 |
| KF-010 RB | 32 | 93 | 51,3 | 23 | 16 | 4 | 25,4 | | 25,9 | 4,3 | 100 | 0,090 |
| KF-012 DB | 90 | 128 | 70 | 23 | 12,7 | 27 | 25 | 39,6 | 45 | 5,6 | 100 | 0,210 |
| KF-012 DBL | 70 | 128 | 85 | 23 | 12,7 | 27 | 25 | 39,6 | 60 | 5,6 | 100 | 0,215 |
| KF-012 RB | 90 | 132 | 70 | 29 | 12,7 | 6 | 25 | | 45 | 5,6 | 100 | 0,210 |
| KF-012 RBL | 70 | 132 | 85 | 29 | 12,7 | 6 | 25 | | 60 | 5,6 | 100 | 0,215 |
| KF-017 DB | 170 | 175 | 90 | 32 | 19 | 32 | 35 | 49 | 55 | 7,0 | 100 | 0,400 |
| KF-017 RB TR | 170 | 175 | 90 | 32 | 19 | 32 | 35 | 49 | 55 | 7,0 | 100 | 0,455 |
| KF-017 DB TR | 170 | 175 | 90 | 32 | 19 | 32 | 35 | 49 | 55 | 7,0 | 100 | 0,400 |
| KF-017 DBL | 150 | 175 | 120 | 32 | 19 | 32 | 35 | 49 | 85 | 7,0 | 100 | 0,410 |
| KF-017 DBL TR | 150 | 175 | 120 | 32 | 19 | 32 | 35 | 49 | 85 | 7,0 | 100 | 0,410 |
| KF-017 DS | 200 | 175 | 120 | 32 | 19 | 32 | 35 | 49 | 85 | 7,0 | 100 | 0,410 |
| KF-017 RB | 170 | 183 | 90 | 40 | 19 | 6,5 | 35 | | 55 | 7,0 | 100 | 0,400 |
| KF-017 RBL | 150 | 183 | 120 | 40 | 19 | 6,5 | 35 | | 85 | 7,0 | 100 | 0,410 |
| KF-017 RS | 200 | 183 | 120 | 40 | 19 | 6,5 | 35 | | 85 | 7,0 | 100 | 0,410 |
| KF-018 DB | 250 | 178 | 120 | 32 | 20 | 33,5 | 37 | 50,5 | 83 | 7,0 | 100 | 0,430 |
| KF-018 DB TR | 250 | 178 | 120 | 32 | 20 | 33,5 | 37 | 50,5 | 83 | 7,0 | 100 | 0,430 |
| KF-018 DS | 250 | 178 | 120 | 32 | 20 | 33,5 | 37 | 50,5 | 83 | 7,0 | 100 | 0,430 |
| KF-018 RB | 250 | 186 | 120 | 40 | 20 | 6,5 | 37 | | 83 | 7,0 | 100 | 0,430 |
| KF-018 RS | 250 | 186 | 120 | 40 | 20 | 6,5 | 37 | | 83 | 7,0 | 100 | 0,430 |
| KF-016 DB | 280 | 175 | 90 | 31,5 | 19,5 | 32,5 | 35 | 50 | 55 | 7,5 | 100 | 0,420 |
| KF-016 DBL | 260 | 175 | 137,4 | 31,5 | 19,5 | 32,5 | 35 | 50 | 102,4 | 7,5 | 100 | 0,440 |
| KF-016 DS | 310 | 175 | 137,4 | 31,5 | 19,5 | 32,5 | 35 | 50 | 102,4 | 7,5 | 100 | 0,440 |
| KF-016 RB | 280 | 183 | 90 | 39 | 19,5 | 6,7 | 35 | | 55 | 7,5 | 100 | 0,420 |
| KF-016 RBL | 260 | 183 | 137,4 | 39 | 19,5 | 6,7 | 35 | | 102,4 | 7,5 | 100 | 0,440 |
| KF-016 RS | 310 | 183 | 137,4 | 39 | 19,5 | 6,7 | 35 | | 102,4 | 7,5 | 100 | 0,440 |
| KF-011 DB | 340 | 211 | 140 | 41 | 32 | 44 | 48 | 60 | 92 | 8,5 | 100 | 0,820 |
| KF-011 DB TR | 340 | 211 | 140 | 41 | 32 | 44 | 48 | 60 | 92 | 8,5 | 100 | 0,820 |
| KF-011 DBL | 315 | 211 | 166 | 41 | 32 | 44 | 48 | 60 | 118 | 8,5 | 100 | 0,850 |
| KF-011 DBL TR | 360 | 211 | 166 | 41 | 32 | 44 | 48 | 60 | 118 | 8,5 | 100 | 0,850 |
| KF-011 DS | 340 | 211 | 166 | 41 | 32 | 44 | 48 | 60 | 118 | 8,5 | 100 | 0,830 |
| KF-011 RB | 340 | 223 | 140 | 53 | 32 | 8 | 48 | | 92 | 8,5 | 100 | 0,820 |
| KF-011 RBL | 315 | 223 | 166 | 53 | 32 | 8 | 48 | | 118 | 8,5 | 100 | 0,850 |
| KF-011 RS | 360 | 223 | 166 | 53 | 32 | 8 | 48 | | 118 | 8,5 | 100 | 0,830 |
| KF-111 DB | 680 | 258 | 155 | 50 | 32 | 45 | 55 | 67 | 100 | 8,5 | 100 | 1,400 |
| KF-111 DB TR | 680 | 258 | 155 | 50 | 32 | 45 | 55 | 67 | 100 | 8,5 | 100 | 1,400 |
| KF-111 DBL | 650 | 258 | 200 | 50 | 32 | 45 | 55 | 67 | 145 | 8,5 | 100 | 1,440 |
| KF-111 DBL TR | 650 | 258 | 200 | 50 | 32 | 45 | 55 | 67 | 145 | 8,5 | 100 | 1,440 |
| KF-111 DS | 700 | 258 | 200 | 50 | 32 | 45 | 55 | 67 | 145 | 8,5 | 100 | 1,420 |
| KF-111 RB | 680 | 268 | 155 | 60 | 32 | 9,5 | 55 | | 100 | 8,5 | 100 | 1,400 |
| KF-111 RBL | 650 | 268 | 200 | 60 | 32 | 9,5 | 55 | | 145 | 8,5 | 100 | 1,440 |
| KF-111 RS | 700 | 268 | 200 | 60 | 32 | 9,5 | 55 | | 145 | 8,5 | 100 | 1,420 |

GRAMPOS VERTICAIS



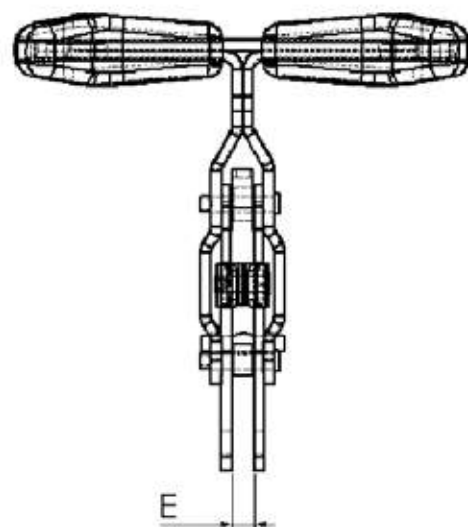
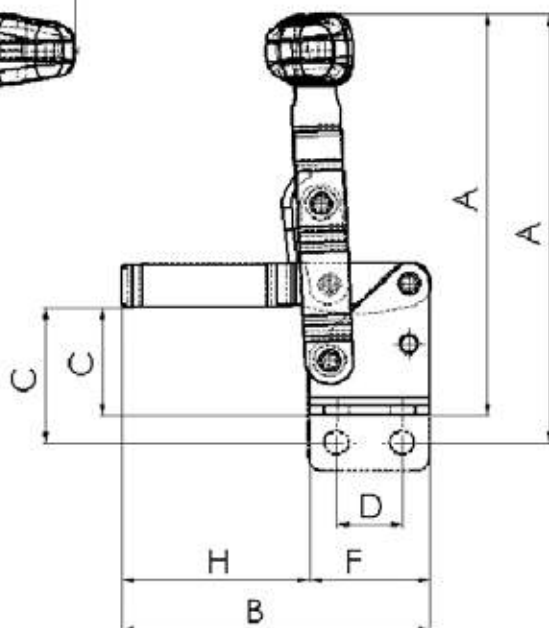
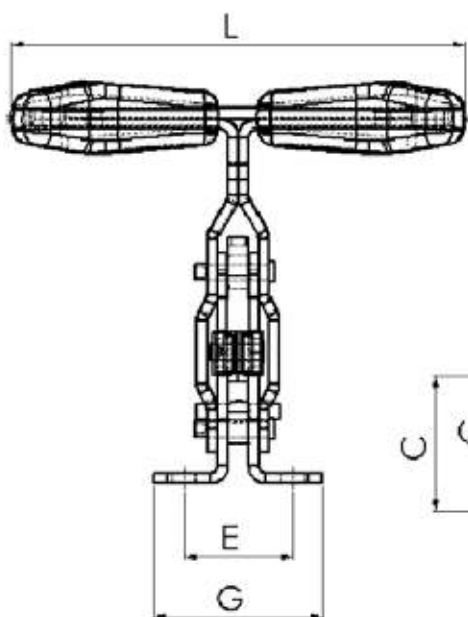
KF-017 DT



KF-017 DTS



KF-017 RTL



BASES
D - Dobrada
R - Retá

HASTES
S - Sólida
L - Longa

CABO
T - Cabo "T"

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | L | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|-----|-----|----|----|-----|----|----|----|-----|-----|--------------------|---------|
| KF-017 DT | 170 | 120 | 90 | 32 | 19 | 32 | 35 | 49 | 55 | 7,0 | 132 | 100 | 0,405 |
| KF-017 DTL | 150 | 120 | 120 | 32 | 19 | 32 | 35 | 49 | 85 | 7,0 | 132 | 100 | 0,415 |
| KF-017 DTS | 200 | 120 | 120 | 32 | 19 | 32 | 35 | 49 | 85 | 7,0 | 132 | 100 | 0,415 |
| KF-017 RT | 170 | 128 | 90 | 40 | 19 | 6,5 | 35 | | 55 | 7,0 | 132 | 100 | 0,405 |
| KF-017 RTL | 150 | 128 | 120 | 40 | 19 | 6,5 | 35 | | 85 | 7,0 | 132 | 100 | 0,415 |
| KF-017 RTS | 200 | 128 | 120 | 40 | 19 | 6,5 | 35 | | 85 | 7,0 | 132 | 100 | 0,415 |

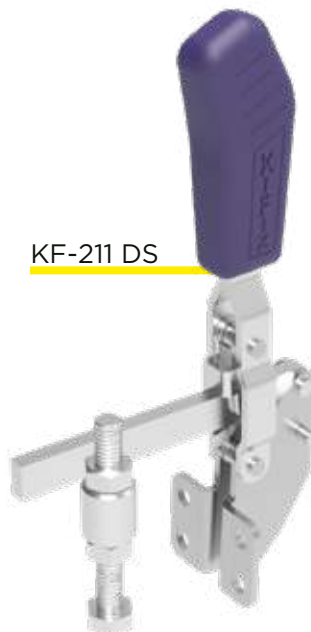
GRAMPOS VERTICAIS



KF-010 F



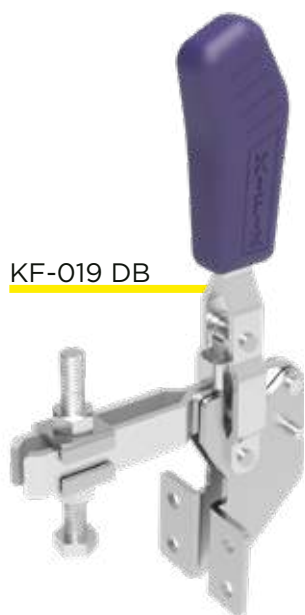
KF-311 RB



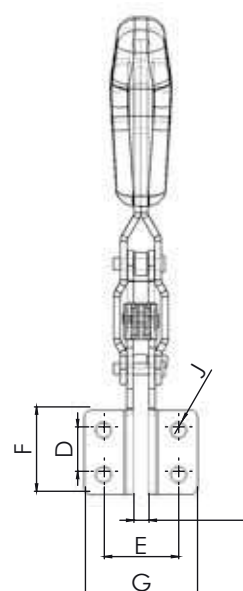
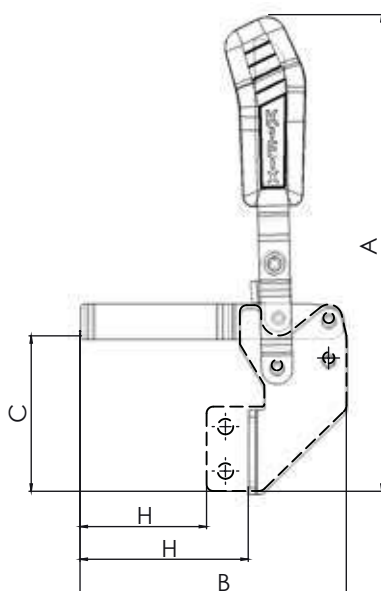
KF-211 DS



KF-411 RS



KF-019 DB



BASES
D - Dobrada
R - Reta

HASTES
B - Bifurcada
S - Sólida
L - Longa

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|-----|-----|-----|------|------|----|------|-----|-----|--------------------|---------|
| KF-010 F | 32 | 112 | 51 | 42 | 16 | 23,7 | 25 | 33 | 24 | 4,3 | 100 | 0,1 |
| KF-012 F | 90 | 149 | 70 | 47 | 12,7 | 27 | 25 | 40 | 41 | 5,5 | 100 | 0,23 |
| KF-019 DB | 250 | 215 | 120 | 70 | 20 | 33,5 | 38 | 50,5 | 76 | 7,0 | 100 | 0,5 |
| KF-019 DS | 250 | 215 | 120 | 70 | 20 | 33,5 | 38 | 50,5 | 76 | 7,0 | 100 | 0,5 |
| KF-019 RB | 250 | 215 | 120 | 70 | 20 | 6,5 | 38 | | 57 | 7,0 | 100 | 0,5 |
| KF-019 RS | 250 | 215 | 120 | 70 | 20 | 6,5 | 38 | | 57 | 7,0 | 100 | 0,5 |
| KF-211 DB | 150 | 207 | 120 | 65 | 19 | 32 | 35 | 46,5 | 79 | 7,0 | 100 | 0,48 |
| KF-211 DS | 200 | 207 | 120 | 65 | 19 | 32 | 35 | 46,5 | 79 | 7,0 | 100 | 0,48 |
| KF-211 RB | 150 | 207 | 120 | 65 | 19 | 6,5 | 35 | | 69 | 7,0 | 100 | 0,48 |
| KF-211 RS | 200 | 207 | 120 | 65 | 19 | 6,5 | 35 | | 69 | 7,0 | 100 | 0,48 |
| KF-311 DB | 250 | 260 | 166 | 90 | 32 | 44 | 49 | 60 | 106 | 8,5 | 100 | 0,96 |
| KF-311 DS | 300 | 260 | 166 | 90 | 32 | 44 | 49 | 60 | 106 | 8,5 | 100 | 0,93 |
| KF-311 RB | 250 | 260 | 166 | 90 | 32 | 8 | 49 | | 97 | 8,5 | 100 | 0,96 |
| KF-311 RS | 300 | 260 | 166 | 90 | 32 | 8 | 49 | | 97 | 8,5 | 100 | 0,93 |
| KF-411 DB | 650 | 321 | 200 | 113 | 32 | 45 | 55 | 67 | 134 | 8,5 | 100 | 1,75 |
| KF-411 DS | 700 | 321 | 200 | 113 | 32 | 45 | 55 | 67 | 134 | 8,5 | 100 | 1,7 |
| KF-411 RB | 650 | 321 | 200 | 113 | 32 | 10 | 55 | | 126 | 8,5 | 100 | 1,75 |
| KF-411 RS | 700 | 321 | 200 | 113 | 32 | 10 | 55 | | 126 | 8,5 | 100 | 1,7 |

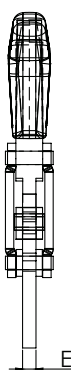
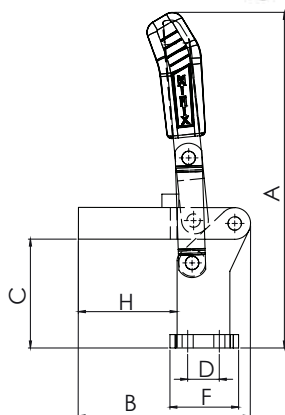
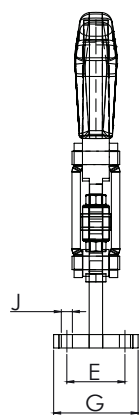
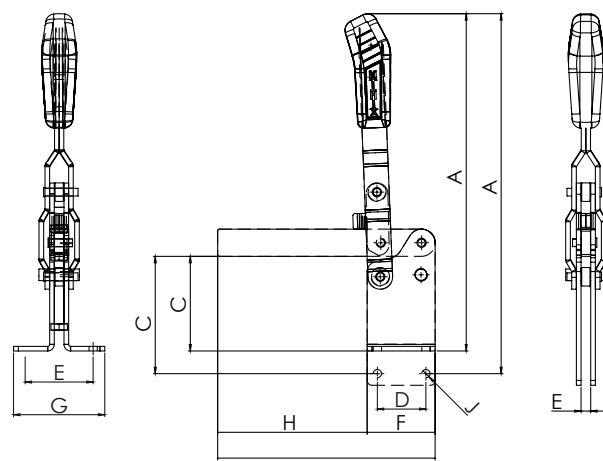
GRAMPOS VERTICAIS



KF-615 B



KF-641 DS



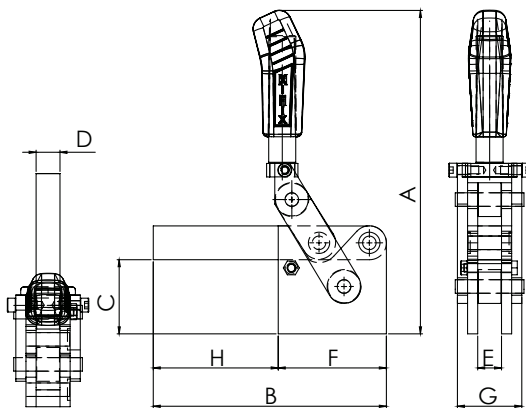
KF-066 STR



KF-066 TS



KF-875



BASES
 D - Dobrada
 R - Reta
 T - Base T

HASTES
 B - Bifurcada
 S - Sólida
 L - Longa

TR - Trava

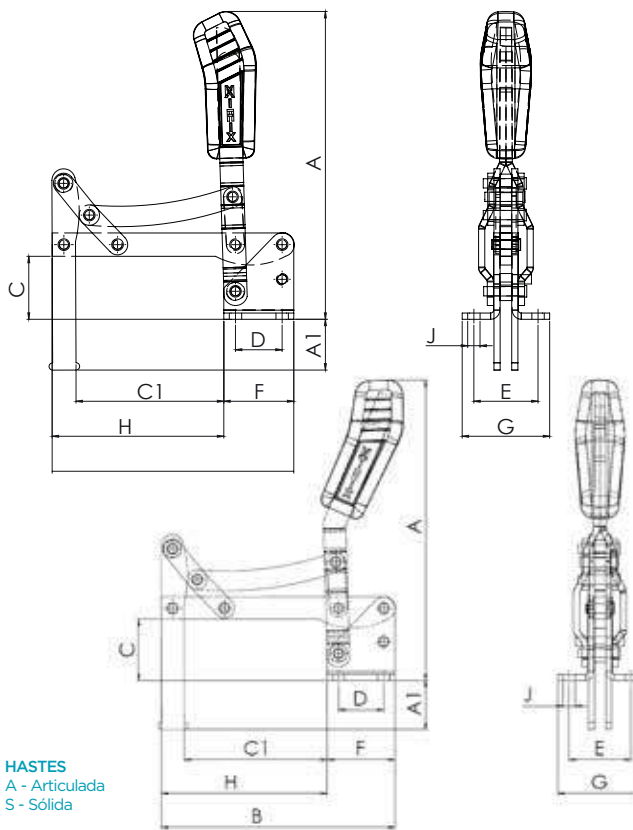
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|--------------|-----------------------|-----|-----|------|------|------|-------|------|-------|------|--------------------|---------|
| KF-615 B | 340 | 215 | 108 | 42 | 25,4 | 38,1 | 50,8 | 50,8 | 57 | 7,0 | 125 | 0,92 |
| KF-615 BL | 340 | 215 | 191 | 42 | 25,4 | 38,1 | 50,8 | 50,8 | 140 | 7,0 | 125 | 0,92 |
| KF-616 D | 950 | 249 | 155 | 50 | 32 | 45 | 53,5 | 67 | 101,5 | 7,0 | 125 | 1,35 |
| KF-616 R | 950 | 257 | 155 | 58 | 32 | 9,5 | 53,5 | | 101,5 | 7,0 | 125 | 1,35 |
| KF-641 DB | 800 | 347 | 224 | 98 | 50 | 70 | 70 | 94 | 154 | 8,5 | 85 | 2,25 |
| KF-641 RB | 800 | 371 | 224 | 121 | 50 | 10 | 70 | | 154 | 8,5 | 85 | 2,25 |
| KF-641 DS | 800 | 347 | 224 | 98 | 50 | 70 | 70 | 94 | 154 | 8,5 | 85 | 2,25 |
| KF-641 RS | 800 | 371 | 224 | 121 | 50 | 10 | 70 | | 154 | 8,5 | 85 | 2,25 |
| KF-066 S | 1400 | 305 | 163 | 90 | | 12,7 | 50 | | 93 | | 150 | 3,3 |
| KF-066 S TR | 1400 | 305 | 163 | 90 | | 12,7 | 50 | | 93 | | 150 | 3,8 |
| KF-066 TS | 1400 | 318 | 163 | 103 | 30 | 55 | 65 | 80 | 93 | 10,5 | 150 | 3,8 |
| KF-066 TS TR | 1400 | 318 | 163 | 103 | 30 | 55 | 65 | 80 | 93 | 10,5 | 150 | 4,3 |
| KF-845 | 1150 | 246 | 190 | 56,2 | 19 | 19 | 82 | 50,9 | 108 | | 120 | 3,35 |
| KF-875 | 1800 | 304 | 219 | 69,7 | 22,4 | 22,4 | 101,6 | 60,5 | 117,4 | | 90 | 5,6 |

GRAMPOS VERTICAIS

KF-011 DS A



KF-011 DS A JD

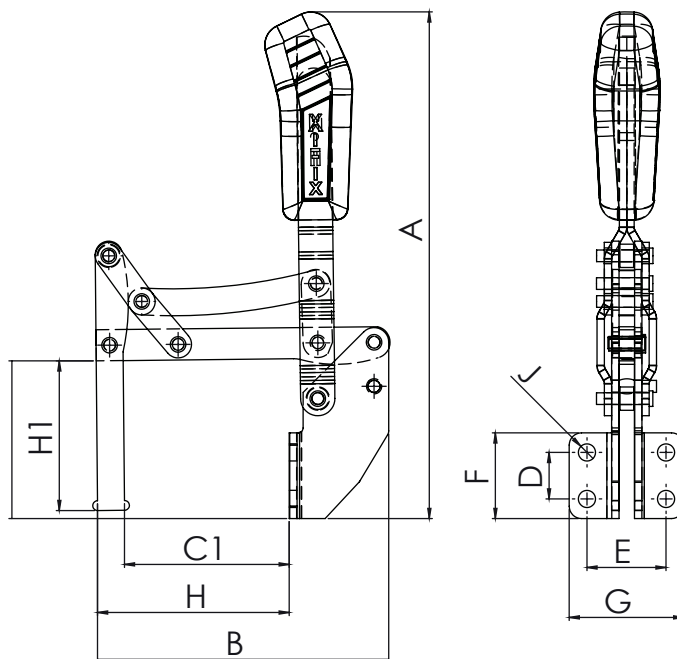
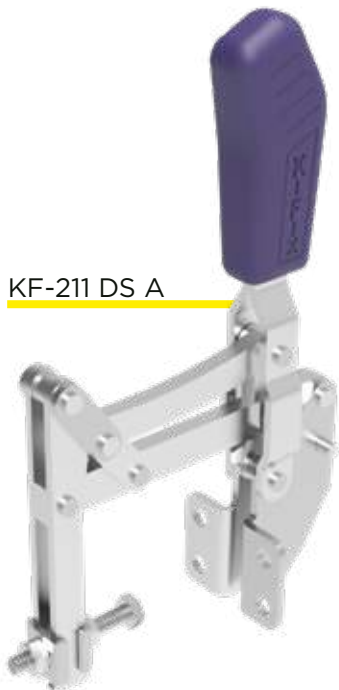


BASES
D - Dobrada

HASTES
A - Articulada
S - Sólida

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | A1 | B | C | C1 | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|----------------|-----------------------|-----|----|-----|----|-----|----|----|----|----|-----|-----|--------------------|---------|
| KF-017 DS A | 160 | 175 | 29 | 120 | 32 | 73 | 19 | 32 | 35 | 49 | 85 | 7,0 | 90 | 0,530 |
| KF-011 DS A | 240 | 211 | 35 | 166 | 41 | 101 | 32 | 44 | 48 | 60 | 118 | 8,5 | 90 | 1,150 |
| KF-011 DS A JD | 240 | 211 | 35 | 166 | 41 | 101 | 32 | 44 | 48 | 60 | 118 | 8,5 | 90 | 1,150 |
| KF-111 DS A | 560 | 258 | 43 | 200 | 50 | 125 | 32 | 45 | 55 | 67 | 145 | 8,5 | 90 | 2,050 |

KF-211 DS A



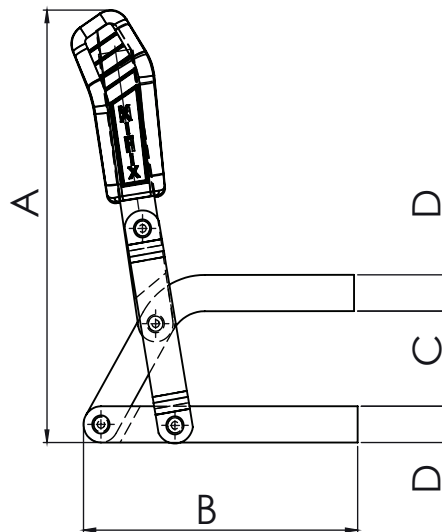
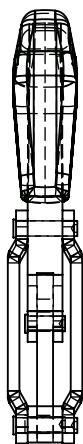
BASES
D - Dobrada

HASTES
A - Articulada
S - Sólida

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | C1 | D | E | F | G | H | H1 | J | ÂNGULO DE ABERTURA | PESO KG |
|-------------|-----------------------|-----|-----|-----|------|----|----|----|------|-----|----|-----|--------------------|---------|
| KF-211 DS A | 160 | 207 | 120 | 65 | 67,5 | 19 | 32 | 35 | 46,5 | 79 | 61 | 7,0 | 100 | 0,560 |
| KF-311 DS A | 240 | 260 | 166 | 90 | 90 | 32 | 44 | 49 | 60 | 106 | 78 | 8,5 | 100 | 1,240 |
| KF-411 DS A | 560 | 321 | 200 | 113 | 114 | 32 | 45 | 55 | 67 | 134 | 92 | 8,5 | 100 | 2,250 |

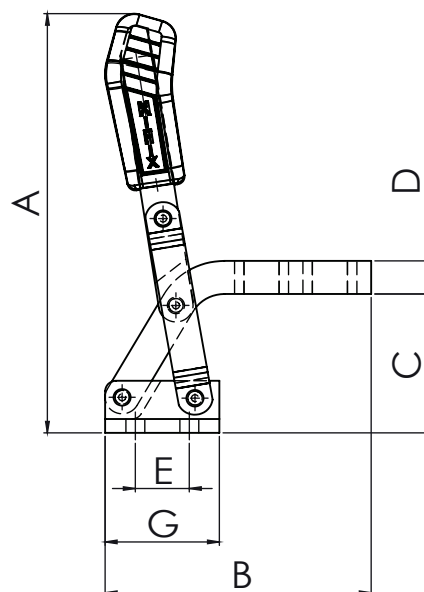
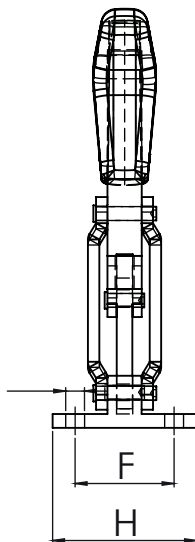
GRAMPOS VERTICAIS

KF-MP



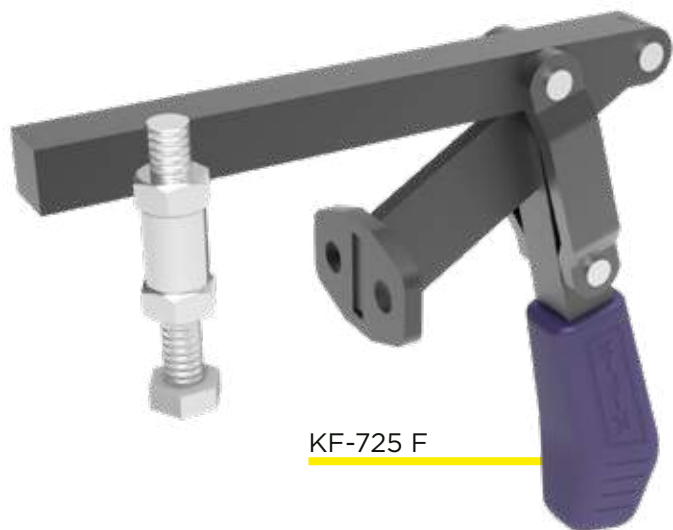
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|-----|-----|----|------|--------------------|---------|
| KF-01 MP | 160 | 125 | 70 | 15 | 12,7 | 120 | 0,320 |
| KF-02 MP | 300 | 171 | 92 | 20 | 14,3 | 120 | 0,580 |
| KF-03 MP | 450 | 191 | 101 | 30 | 15,8 | 120 | 1,350 |
| KF-05 MP | 500 | 227 | 150 | 50 | 19,1 | 120 | 2,040 |
| KF-06 MP | 500 | 247 | 161 | 60 | 19,1 | 120 | 2,135 |
| KF-09 MP | 1800 | 324 | 200 | 90 | 25,4 | 120 | 4,250 |

KF-JD

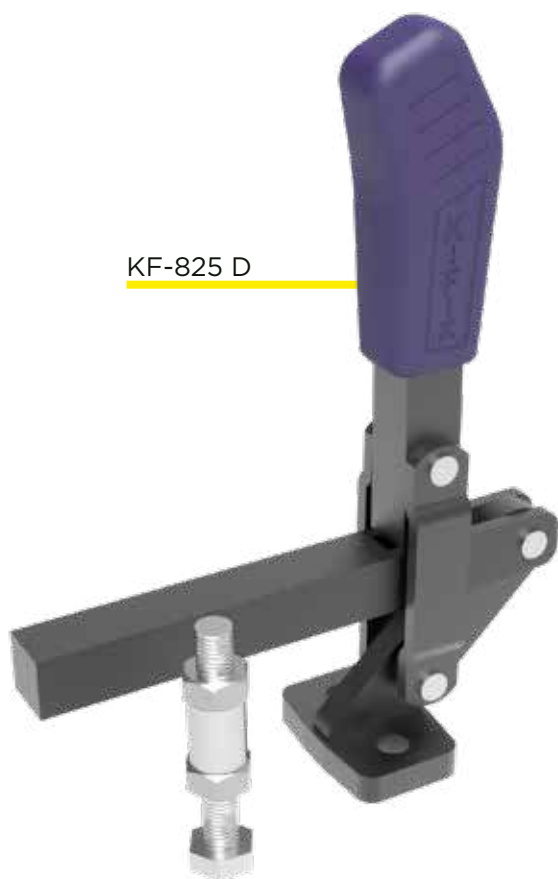
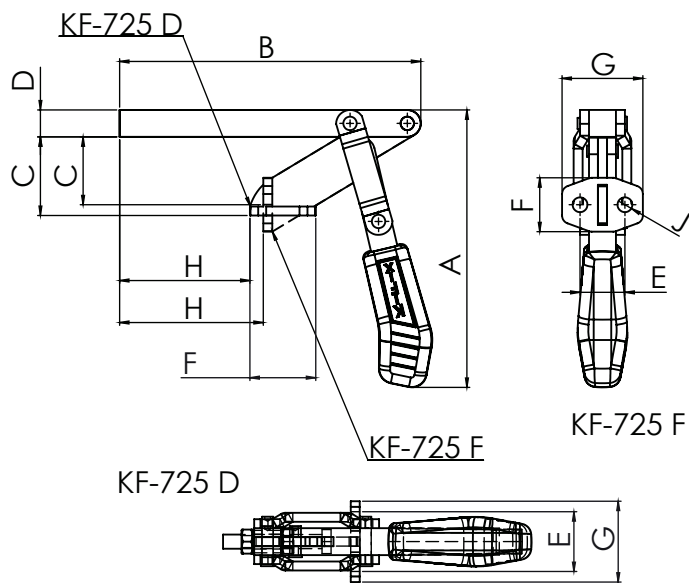


| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|-----|-----|----|------|----|----|------|----|------|--------------------|---------|
| KF-03 JD | 450 | 206 | 101 | 56 | 15,8 | 32 | 44 | 48 | 60 | 8,5 | 120 | 1,360 |
| KF-05 JD | 500 | 241 | 148 | 80 | 19,1 | 30 | 55 | 63,5 | 80 | 10,5 | 120 | 2,100 |

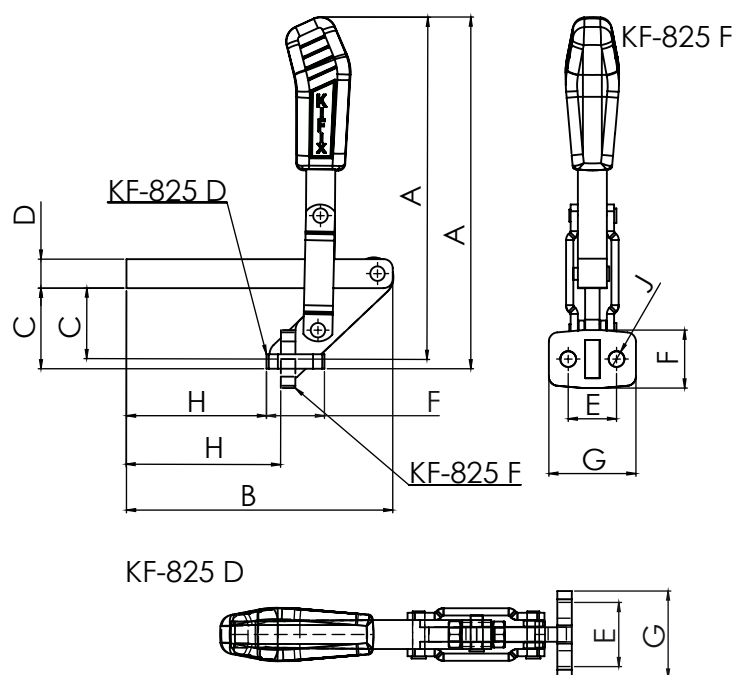
GRAMPOS VERTICAIS



KF-725 F



KF-825 D

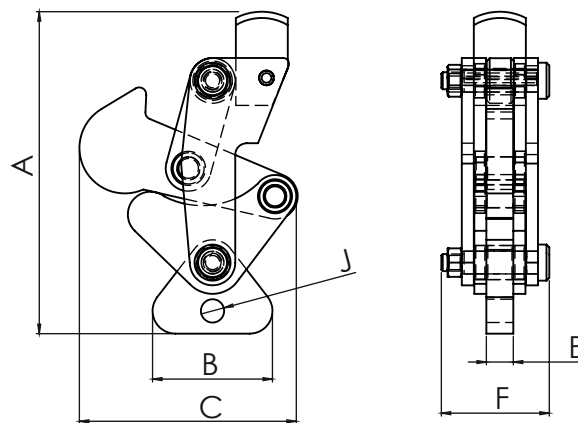


BASES
D - Dobrada
F - Frontal

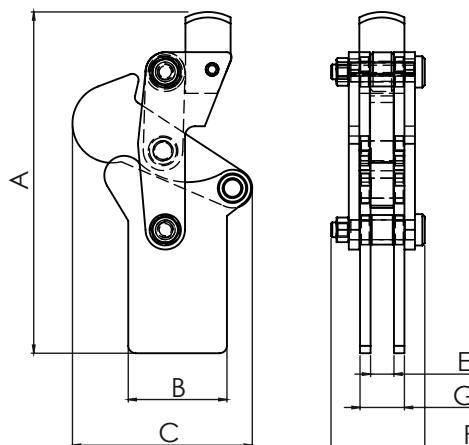
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|-----|-----|------|----|----|------|------|-------|------|--------------------|---------|
| KF-725 D | 450 | 196 | 213 | 55,6 | 19 | 32 | 38,1 | 57,2 | 92,2 | 10,5 | 195 | 2,03 |
| KF-725 F | 450 | 196 | 213 | 48 | 19 | 32 | 38,1 | 57,2 | 101,6 | 10,5 | 195 | 2,03 |
| KF-825 D | 450 | 231 | 175 | 53 | 19 | 32 | 38,1 | 57,2 | 92,2 | 10,5 | 195 | 1,85 |
| KF-825 F | 450 | 225 | 175 | 46,7 | 19 | 32 | 38,1 | 57,2 | 101,6 | 10,5 | 195 | 1,85 |

GRAMPOS VERTICAIS

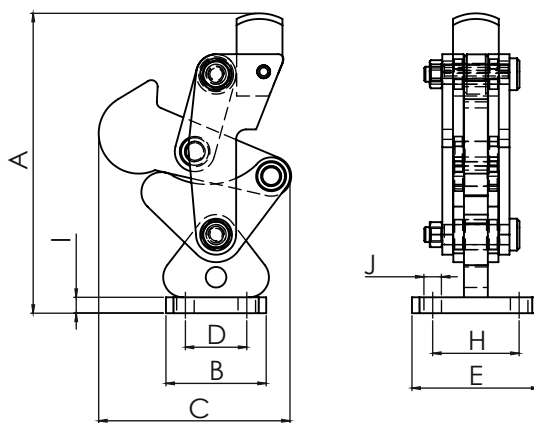
KFU A
Base triangular



KFU D
Base T



KFU R
Base reta dupla



| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | I | J | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|-----|------|-----|------|------|------|----|------|------|------|--------------------|---------|
| KFU-03 A | 680 | 105 | 42 | 72 | | 9,5 | 42 | | | | 8,5 | 200 | 0,67 |
| KFU-03 D | 680 | 112 | 40 | 72 | 24,5 | 51 | 42 | | 34,5 | 6,35 | 7,0 | 200 | 0,76 |
| KFU-03 R | 680 | 130 | 40 | 68 | | 9,5 | 42 | 18 | | | | 200 | 0,73 |
| KFU-05 A | 1000 | 145 | 60 | 98 | | 12,7 | 47 | | | | 10,5 | 200 | 1,17 |
| KFU-05 D | 1000 | 153 | 55 | 98 | 31,5 | 64 | 47 | | 45 | 8 | 8,5 | 200 | 1,38 |
| KFU-05 R | 1000 | 170 | 50 | 92 | | 12,7 | 47 | 22 | | | | 200 | 1,24 |
| KFU-06 A | 2200 | 176 | 70 | 118 | | 15,9 | 66 | | | | 12,5 | 200 | 2,72 |
| KFU-06 D | 2200 | 186 | 70 | 118 | 40 | 80 | 66 | | 50 | 9,5 | 10,5 | 200 | 3,11 |
| KFU-06 R | 2200 | 211 | 65 | 114 | | 15,9 | 66 | 29 | | | | 200 | 2,9 |
| KFU-08 A | 3500 | 247 | 84 | 177 | | 19 | 72,5 | | | | 13,0 | 200 | 6,44 |
| KFU-08 D | 3500 | 260 | 100 | 177 | 70 | 150 | 72,5 | | 120 | 12,7 | 10,5 | 200 | 7,83 |
| KFU-08 R | 3500 | 273 | 80,6 | 177 | | 19 | 72,5 | 35 | | | | 200 | 6,27 |

GRAMPOS HORIZONTAIS

KF-105 D



KF-106 D



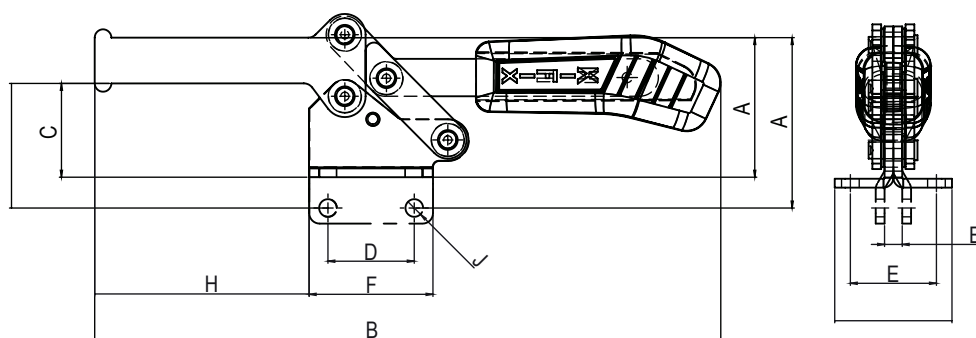
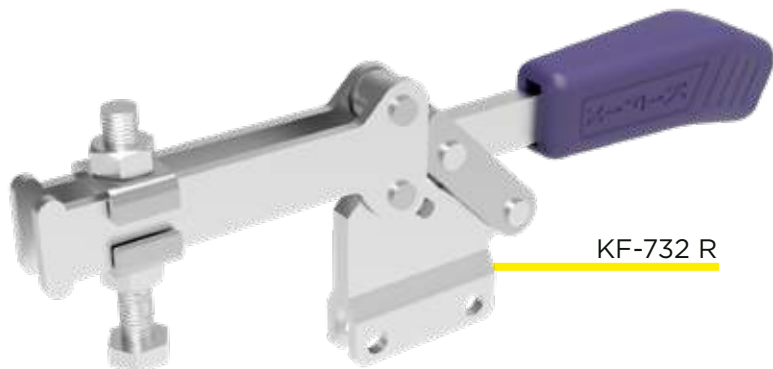
KF-105 DU



KF-107 D



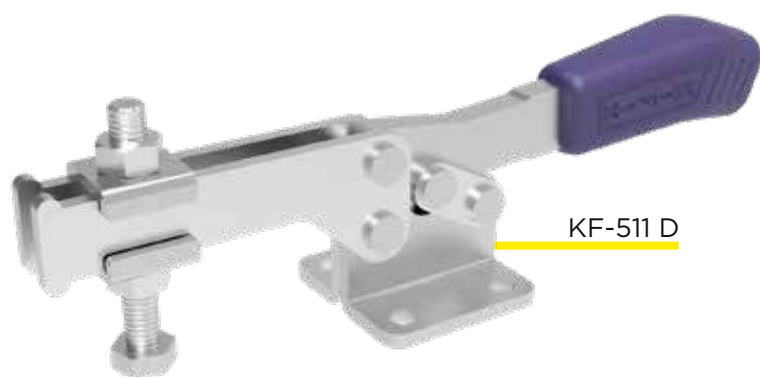
KF-732 R



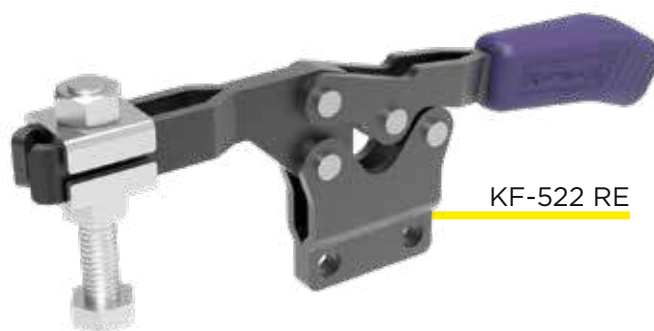
BASES
 D - Dobrada
 R - Reta
 DU - Dobrada única

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|------|-----|----|------|------|------|----|------|-----|--------------------|---------|
| KF-105 D | 30 | 18 | 64 | 8 | 13,5 | 16 | 24 | 24 | 18,6 | 4,3 | 90 | 0,030 |
| KF-105 DU | 30 | 21,3 | 64 | 8 | 13,5 | 8 | 24 | 12 | 18,6 | 4,3 | 90 | 0,030 |
| KF-105 R | 30 | 24 | 64 | 12 | 13,5 | | 24 | | 18,6 | 4,3 | 90 | 0,030 |
| KF-106 D | 70 | 35 | 112 | 20 | 13,5 | 18,3 | 25,5 | 28 | 35 | 4,5 | 90 | 0,095 |
| KF-106 R | 70 | 40 | 112 | 24 | 13,5 | 4 | 25,5 | | 35 | 4,5 | 90 | 0,095 |
| KF-107 D | 70 | 45 | 136 | 22 | 12,7 | 12 | 26 | 35 | 51 | 5,5 | 70 | 0,180 |
| KF-152 D | 130 | 46 | 184 | 25 | 20 | 25,5 | 38 | 37 | 58 | 7,0 | 90 | 0,280 |
| KF-152 R | 130 | 54 | 184 | 32 | 20 | 6 | 38 | | 58 | 7,0 | 90 | 0,280 |
| KF-732 D | 340 | 79 | 301 | 45 | 42 | 42 | 60 | 57 | 103 | 8,5 | 80 | 1,030 |
| KF-732 R | 340 | 93 | 301 | 60 | 42 | 8,5 | 60 | | 103 | 8,5 | 80 | 1,030 |

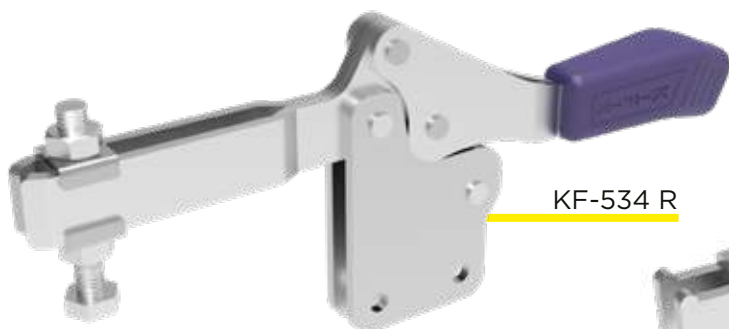
GRAMPOS HORIZONTAIS



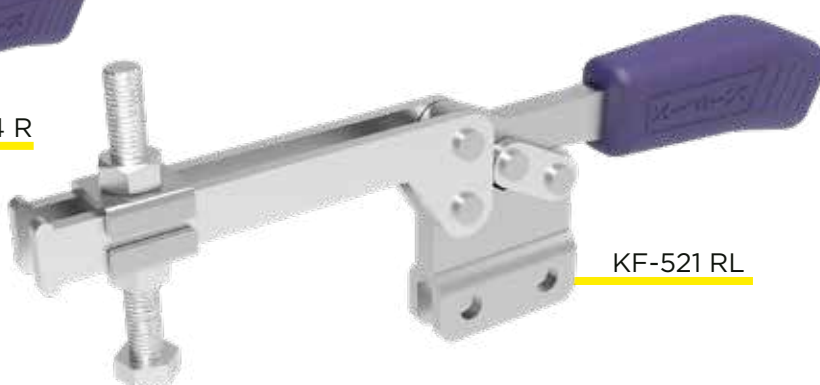
KF-511 D



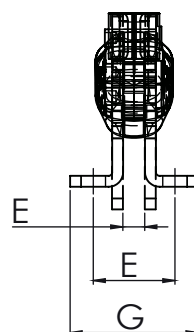
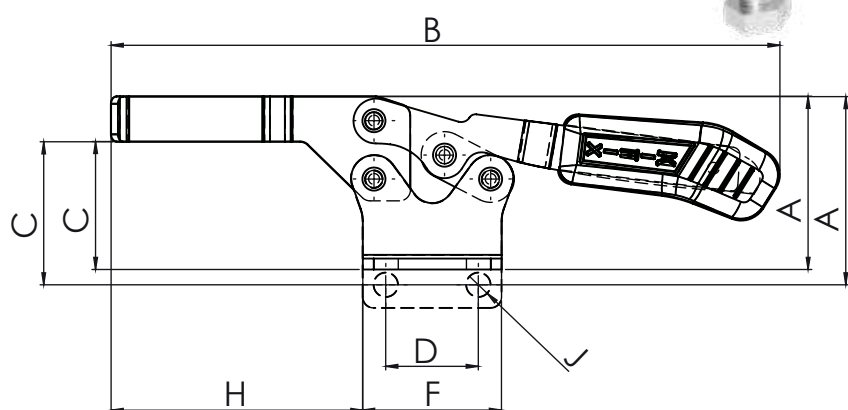
KF-522 RE



KF-534 R



KF-521 RL

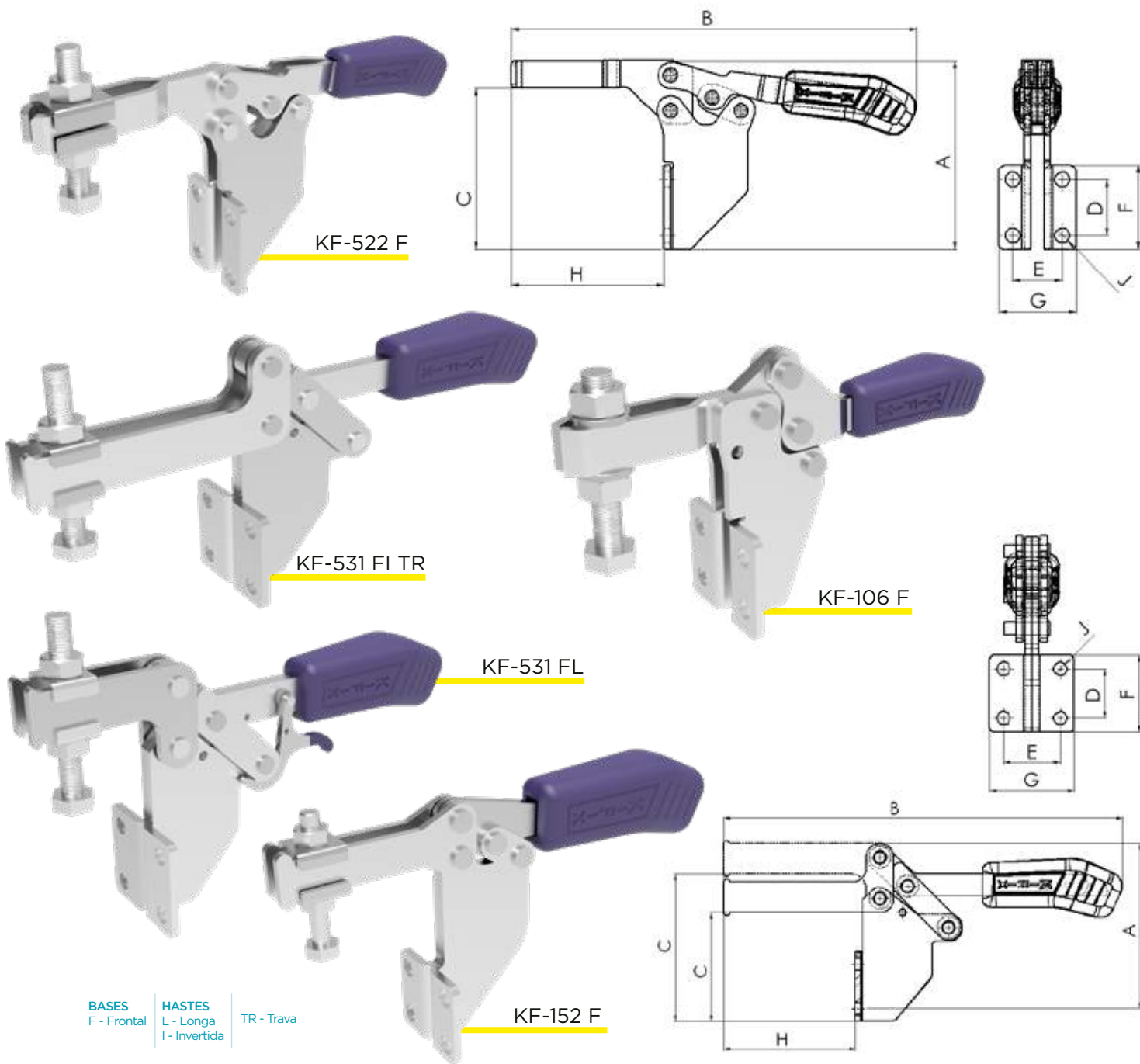


BASES
D - Dobrada
R - Reta
E - Especial

HASTES
L - Longa
TR - Trava

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|-------------|-----------------------|-------|-----|------|------|------|------|------|-------|-----|--------------------|---------|
| KF-511 D | 90 | 47 | 172 | 26 | 24 | 26 | 36 | 37 | 59 | 5,5 | 70 | 0,240 |
| KF-511 R | 90 | 55 | 172 | 34 | 24 | 6,5 | 36 | | 59 | 5,5 | 70 | 0,240 |
| KF-512 D | 90 | 39 | 146 | 26 | 25,4 | 22,4 | 37 | 35 | 57 | 5,3 | 90 | 0,150 |
| KF-512 R | 90 | 45 | 146 | 32 | 25,4 | 4,5 | 37 | | 57 | 5,3 | 90 | 0,150 |
| KF-521 D | 130 | 51 | 208 | 36 | 25,4 | 24 | 45 | 42 | 68 | 7,0 | 70 | 0,440 |
| KF-521 D TR | 130 | 51 | 235 | 36 | 25,4 | 24 | 45 | 42 | 68 | 7,0 | 70 | 0,480 |
| KF-521 DL | 100 | 51 | 243 | 36 | 25,4 | 24 | 45 | 42 | 103 | 7,0 | 70 | 0,470 |
| KF-521 R | 130 | 57 | 208 | 42 | 25,4 | 6,5 | 45 | | 68 | 7,0 | 70 | 0,440 |
| KF-521 RL | 100 | 57 | 243 | 42 | 25,4 | 6,5 | 45 | | 103 | 7,0 | 70 | 0,470 |
| KF-522 D | 230 | 48 | 184 | 35 | 25,4 | 22,4 | 38 | 35 | 69 | 6,7 | 90 | 0,295 |
| KF-522 R | 230 | 52 | 184 | 39 | 25,4 | 6 | 38 | | 69 | 6,7 | 90 | 0,295 |
| KF-522 RE | 230 | 52 | 184 | 39 | 25,4 | 0 | 38 | | 69 | 6,7 | 90 | 0,295 |
| KF-532 D | 340 | 65 | 294 | 45 | 41 | 42 | 57 | 58 | 105 | 8,5 | 90 | 0,860 |
| KF-532 R | 340 | 76 | 294 | 56 | 41 | 8,5 | 57 | | 105 | 8,5 | 90 | 0,860 |
| KF-532 D TR | 340 | 65 | 294 | 45 | 41 | 42 | 57 | 58 | 105 | 8,5 | 90 | 0,920 |
| KF-534 D | 450 | 107,7 | 335 | 57,2 | 41,3 | 41,3 | 66,7 | 66,7 | 123,7 | 8,5 | 100 | 1,450 |
| KF-534 R | 450 | 116 | 335 | 65,4 | 41,3 | 9,5 | 66,7 | | 123,7 | 8,5 | 100 | 1,450 |

GRAMPOS HORIZONTAIS



BASES
F - Frontal

HASTES
L - Longa
I - Invertida

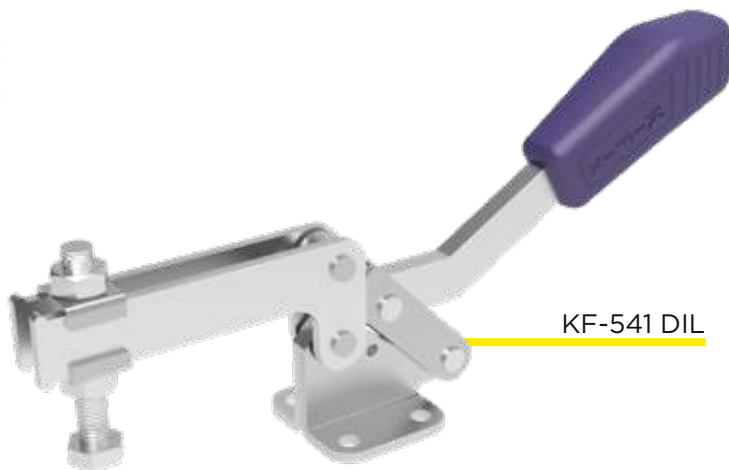
TR - Trava

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|---------------|-----------------------|-----|-----|-----|------|------|------|----|----|-----|--------------------|---------|
| KF-106 F | 70 | 56 | 112 | 40 | 13,5 | 18,3 | 25,5 | 28 | 35 | 4,5 | 90 | 0,110 |
| KF-107 F | 70 | 74 | 127 | 31 | 12,7 | 22 | 25 | 35 | 47 | 5,5 | 70 | 0,200 |
| KF-312 F | 70 | 59 | 117 | 42 | 13,5 | 18,6 | 25,5 | 28 | 41 | 5,0 | 90 | 0,103 |
| KF-152 FL | 90 | 95 | 201 | 74 | 20 | 25,5 | 32 | 37 | 70 | 7,0 | 90 | 0,343 |
| KF-152 F | 130 | 95 | 184 | 74 | 20 | 25,5 | 32 | 37 | 52 | 7 | 90 | 0,34 |
| KF-522 F | 230 | 85 | 184 | 73 | 25,4 | 22,4 | 38 | 35 | 69 | 6,7 | 90 | 0,335 |
| KF-522 FL | 200 | 85 | 214 | 73 | 25,4 | 22,4 | 38 | 35 | 99 | 6,7 | 90 | 0,350 |
| KF-531 F | 400 | 119 | 245 | 78 | 32 | 37 | 50 | 55 | 52 | 8,5 | 80 | 1,035 |
| KF-531 FI | 400 | 119 | 245 | 106 | 32 | 37 | 50 | 55 | 52 | 8,5 | 80 | 1,035 |
| KF-531 FL | 300 | 119 | 287 | 78 | 32 | 37 | 50 | 55 | 95 | 8,5 | 80 | 1,095 |
| KF-531 FIL | 300 | 119 | 287 | 106 | 32 | 37 | 50 | 55 | 95 | 8,5 | 80 | 1,095 |
| KF-531 F TR | 400 | 119 | 245 | 78 | 32 | 37 | 50 | 55 | 52 | 8,5 | 80 | 1,070 |
| KF-531 FI TR | 400 | 119 | 245 | 106 | 32 | 37 | 50 | 55 | 52 | 8,5 | 80 | 1,070 |
| KF-531 FL TR | 300 | 119 | 287 | 78 | 32 | 37 | 50 | 55 | 95 | 8,5 | 80 | 1,130 |
| KF-531 FIL TR | 300 | 119 | 287 | 106 | 32 | 37 | 50 | 55 | 95 | 8,5 | 80 | 0,343 |

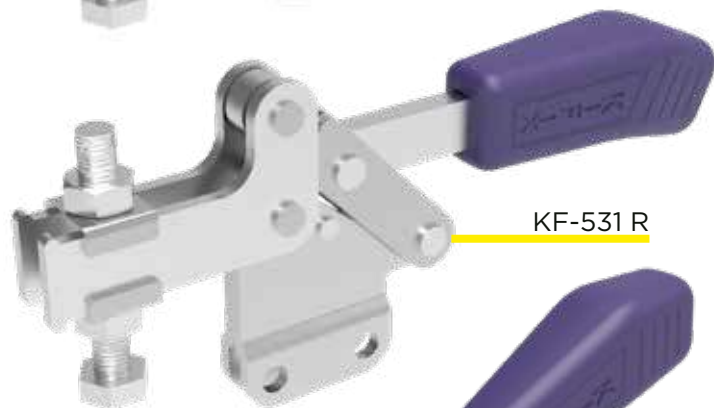
GRAMPOS HORIZONTAIS



KF-531 D TR



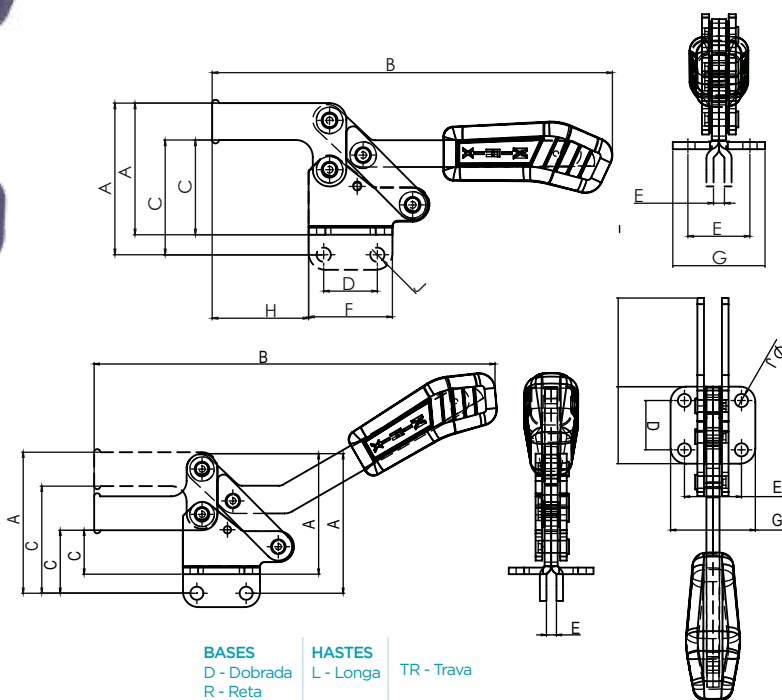
KF-541 DIL



KF-531 R



KF-541 D

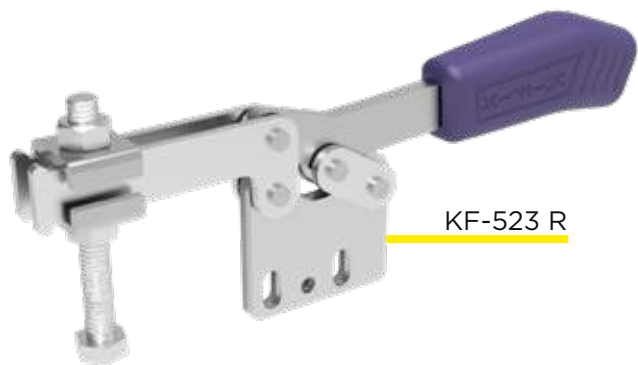


BASES
D - Dobrada
R - Reta

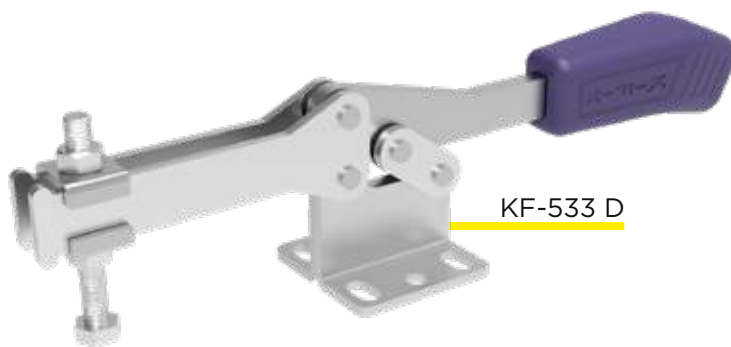
HASTES
L - Longa
TR - Trava

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|---------------|-----------------------|----|-----|----|----|-----|----|----|-----|-----|--------------------|---------|
| KF-531 D | 400 | 78 | 239 | 28 | 32 | 37 | 50 | 55 | 57 | 8,5 | 80 | 0,870 |
| KF-531 DI | 400 | 78 | 239 | 56 | 32 | 37 | 50 | 55 | 57 | 8,5 | 80 | 0,870 |
| KF-531 R | 400 | 91 | 239 | 41 | 32 | 6,5 | 50 | | 57 | 8,5 | 80 | 0,870 |
| KF-531 RI | 400 | 91 | 239 | 69 | 32 | 6,5 | 50 | | 57 | 8,5 | 80 | 0,870 |
| KF-531 DL | 300 | 78 | 281 | 28 | 32 | 37 | 50 | 55 | 100 | 8,5 | 80 | 0,940 |
| KF-531 DIL | 300 | 78 | 281 | 56 | 32 | 37 | 50 | 55 | 100 | 8,5 | 80 | 0,940 |
| KF-531 RL | 300 | 91 | 281 | 41 | 32 | 6,5 | 50 | | 100 | 8,5 | 80 | 0,940 |
| KF-531 RIL | 300 | 91 | 281 | 69 | 32 | 6,5 | 50 | | 100 | 8,5 | 80 | 0,940 |
| KF-531 D TR | 400 | 78 | 245 | 28 | 32 | 37 | 50 | 55 | 57 | 8,5 | 80 | 0,920 |
| KF-531 DI TR | 400 | 78 | 245 | 56 | 32 | 37 | 50 | 55 | 57 | 8,5 | 80 | 0,920 |
| KF-531 DL TR | 300 | 78 | 287 | 28 | 32 | 37 | 50 | 55 | 100 | 8,5 | 80 | 0,980 |
| KF-531 DIL TR | 300 | 78 | 287 | 56 | 32 | 37 | 50 | 55 | 100 | 8,5 | 80 | 0,980 |
| KF-541 D | 400 | 78 | 261 | 28 | 32 | 37 | 50 | 55 | 57 | 8,5 | 80 | 0,920 |
| KF-541 DI | 400 | 78 | 261 | 56 | 32 | 37 | 50 | 55 | 57 | 8,5 | 80 | 0,920 |
| KF-541 R | 400 | 91 | 261 | 41 | 32 | 6,5 | 50 | | 57 | 8,5 | 80 | 0,920 |
| KF-541 RI | 400 | 91 | 261 | 69 | 32 | 6,5 | 50 | | 57 | 8,5 | 80 | 0,920 |
| KF-541 DL | 300 | 78 | 304 | 28 | 32 | 37 | 50 | 55 | 100 | 8,5 | 80 | 0,960 |
| KF-541 DIL | 300 | 78 | 304 | 56 | 32 | 37 | 50 | 55 | 100 | 8,5 | 80 | 0,960 |
| KF-541 RL | 300 | 91 | 304 | 41 | 32 | 6,5 | 50 | | 100 | 8,5 | 80 | 0,960 |
| KF-541 RIL | 300 | 91 | 304 | 69 | 32 | 6,5 | 50 | | 100 | 8,5 | 80 | 0,960 |

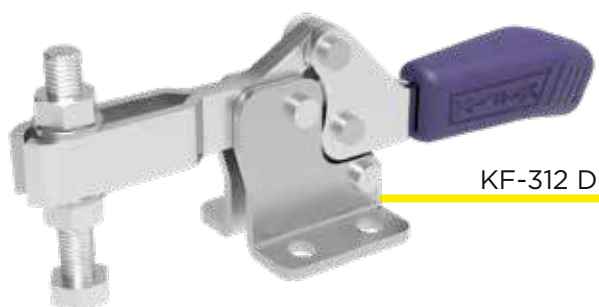
GRAMPOS HORIZONTAIS



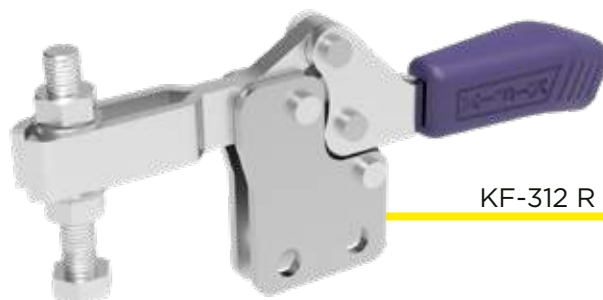
KF-523 R



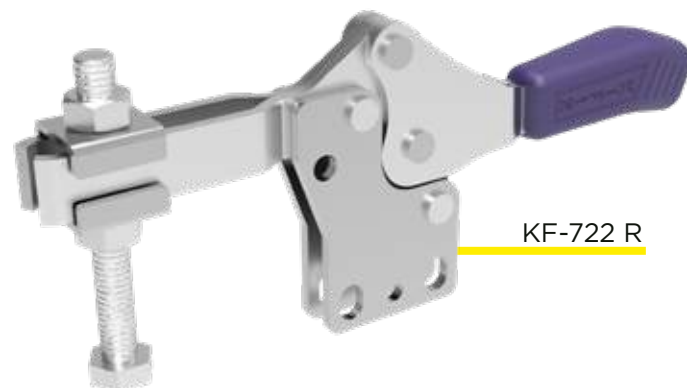
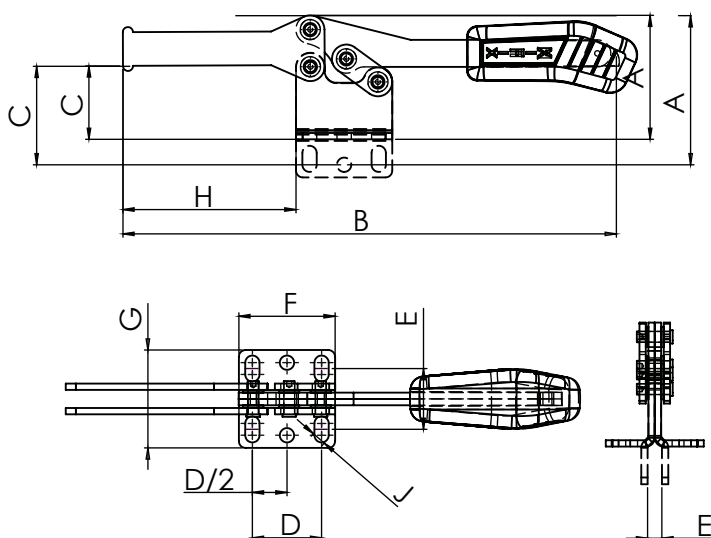
KF-533 D



KF-312 D



KF-312 R

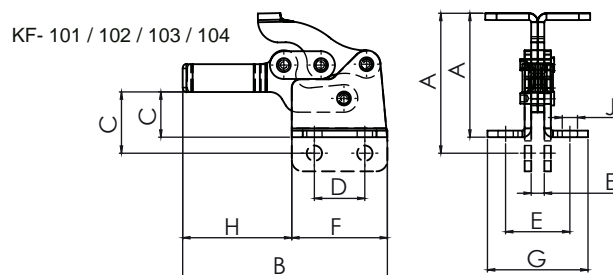
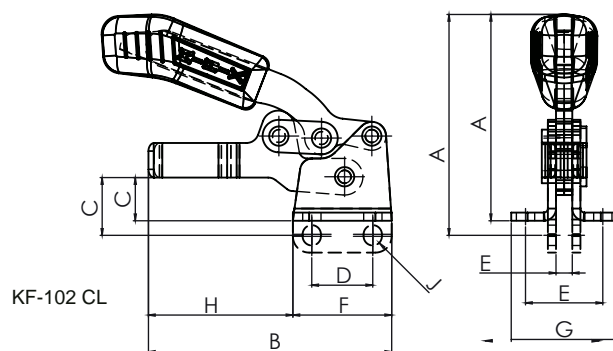


KF-722 R

BASES
D - Dobrada
R - Retã

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|------|-----|------|------|------|------|------|-------|-----|--------------------|---------|
| KF-312 D | 70 | 35 | 112 | 19 | 13,5 | 17,3 | 25,4 | 27,2 | 36 | 4,3 | 90 | 0,085 |
| KF-312 R | 70 | 39 | 112 | 23 | 13,5 | 4,2 | 25,4 | | 36 | 4,3 | 90 | 0,085 |
| KF-712 D | 120 | 50 | 183 | 26 | 26,2 | 26,1 | 37,3 | 40 | 59 | 5,5 | 90 | 0,205 |
| KF-712 R | 120 | 64 | 183 | 35 | 26,2 | 5,2 | 37,3 | | 59 | 5,5 | 90 | 0,205 |
| KF-523 D | 180 | 57 | 221 | 33 | 25,7 | 26,9 | 50 | 44,5 | 66 | 6,5 | 90 | 0,410 |
| KF-523 R | 180 | 74 | 221 | 41 | 25,7 | 0 | 50 | | 66 | 6,5 | 90 | 0,410 |
| KF-722 D | 230 | 61 | 192 | 34 | 26,2 | 28,4 | 39,6 | 43,2 | 68,5 | 7,0 | 90 | 0,355 |
| KF-722 R | 230 | 70 | 192 | 42 | 26,2 | 6,2 | 39,6 | | 68,5 | 7,0 | 90 | 0,355 |
| KF-533 D | 340 | 73,5 | 305 | 43,5 | 41 | 36 | 57 | 58 | 102,5 | 8,5 | 90 | 0,800 |
| KF-533 R | 340 | 88,3 | 305 | 58,3 | 41 | 8,5 | 57 | | 102,5 | 8,5 | 90 | 0,800 |

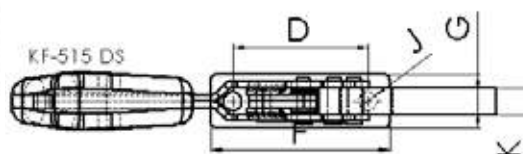
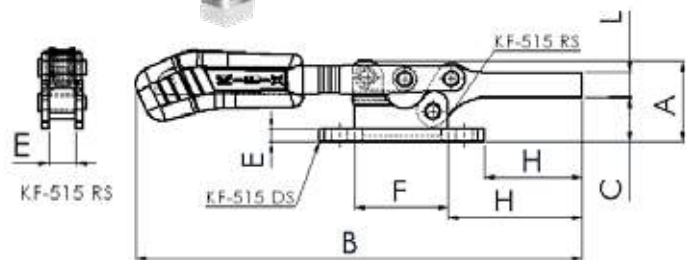
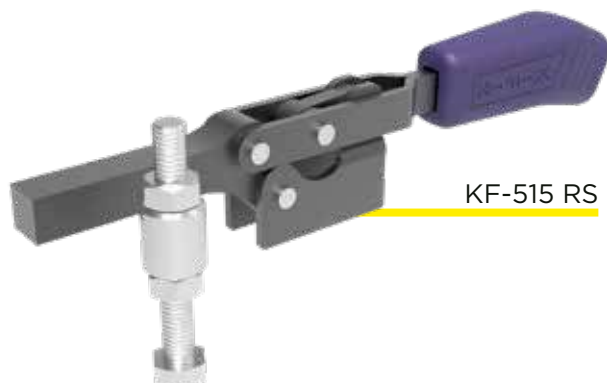
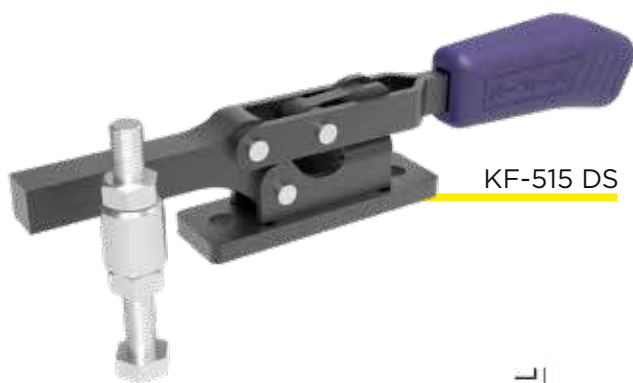
GRAMPOS HORIZONTAIS



BASES
D - Dobrada
R - Retã

HASTES
CL - Cabo Longo
TR - Trava

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | ÂNGULO DE ABERTURA | PESO KG |
|-------------|-----------------------|------|-------|------|------|------|----|------|------|-----|--------------------|---------|
| KF-102 D | 50 | 38 | 60 | 11 | 15 | 19 | 24 | 26 | 36 | 4,5 | 75 | 0,075 |
| KF-102 R | 50 | 42 | 60 | 14 | 15 | 4 | 24 | | 36 | 4,5 | 75 | 0,075 |
| KF-102 D CL | 50 | 54 | 80 | 11 | 15 | 19 | 24 | 26 | 36 | 4,5 | 75 | 0,085 |
| KF-102 R CL | 50 | 58 | 80 | 14 | 15 | 4 | 24 | | 36 | 4,5 | 75 | 0,085 |
| KF-101 D | 65 | 40 | 61 | 12,2 | 13,5 | 16 | 26 | 26 | 35 | 4,5 | 75 | 0,075 |
| KF-101 R | 65 | 43 | 61 | 15 | 13,5 | 4 | 26 | | 35 | 4,5 | 75 | 0,075 |
| KF-103 D | 75 | 57 | 94 | 21 | 23 | 29 | 44 | 46 | 50 | 7,0 | 85 | 0,260 |
| KF-103 D TR | 75 | 57 | 94 | 21 | 23 | 29 | 44 | 46 | 50 | 7,0 | 85 | 0,275 |
| KF-103 R | 75 | 64 | 94 | 28 | 23 | 6 | 44 | | 50 | 7,0 | 85 | 0,260 |
| KF-104 D | 340 | 85,6 | 131,8 | 31,3 | 35 | 38,1 | 64 | 62,7 | 67,8 | 8,5 | 90 | 0,670 |
| KF-104 R | 340 | 95,9 | 131,8 | 41,6 | 35 | 7,5 | 64 | | 67,8 | 8,5 | 90 | 0,670 |

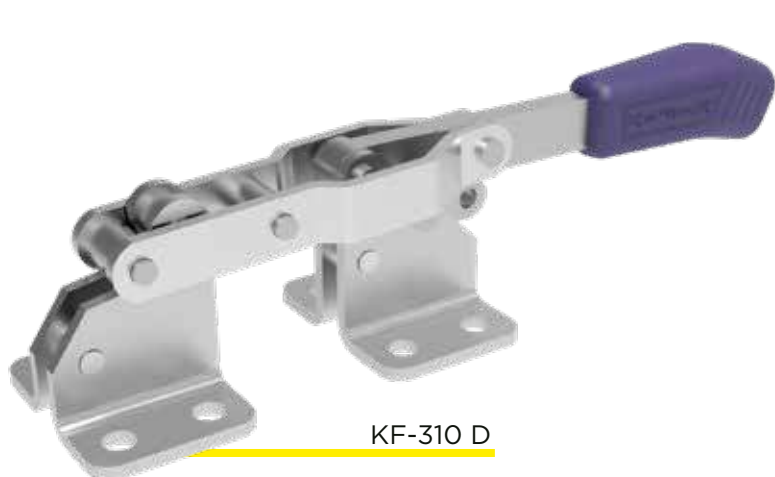


BASES
D - Dobrada
R - Retã

HASTES
S - Sólida

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | K | L | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|------|-----|------|------|------|------|------|------|-----|------|------|--------------------|---------|
| KF-515 DS | 360 | 40,8 | 228 | 22,3 | 63,5 | 6,35 | 84 | 25,4 | 50 | 8,5 | 12,7 | 12,7 | 85 | 0,520 |
| KF-515 RS | 360 | 40,8 | 228 | 22,3 | | 12,7 | 47,8 | | 68,2 | | 12,7 | 12,7 | 85 | 0,450 |

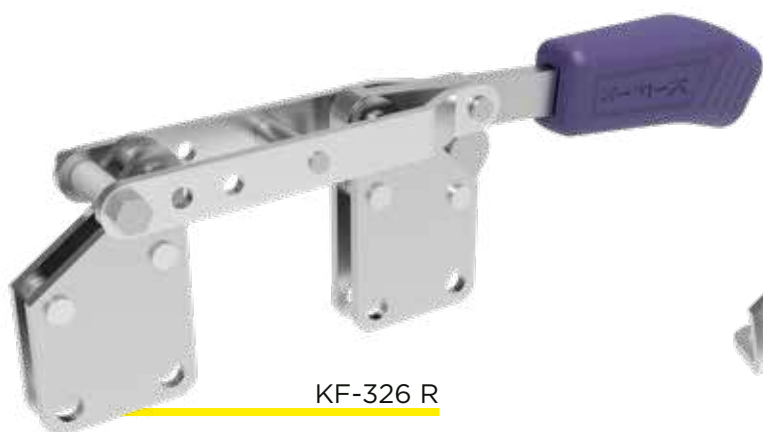
GRAMPOS TENSORES



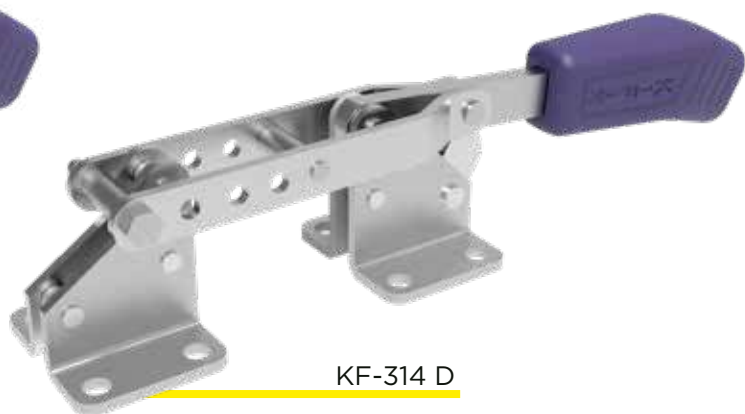
KF-310 D



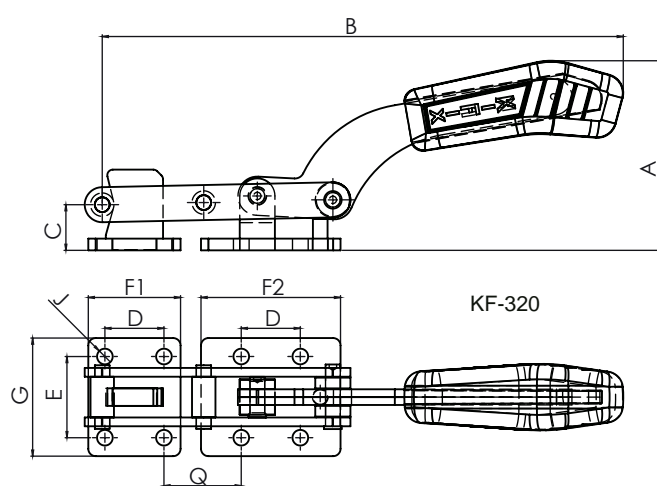
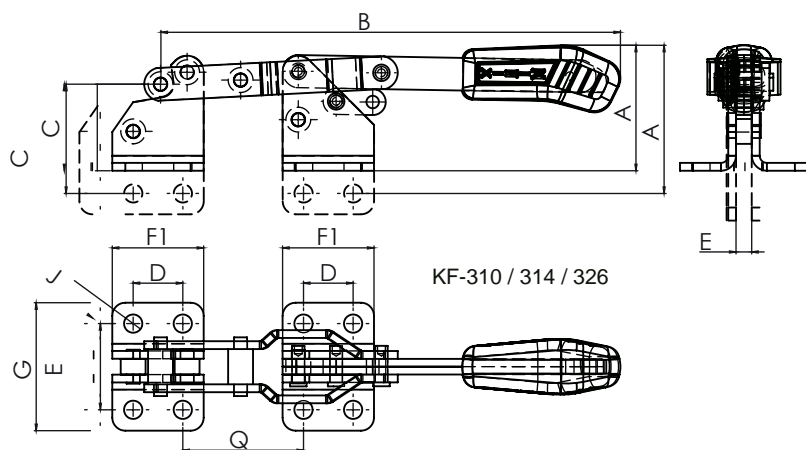
KF-320



KF-326 R



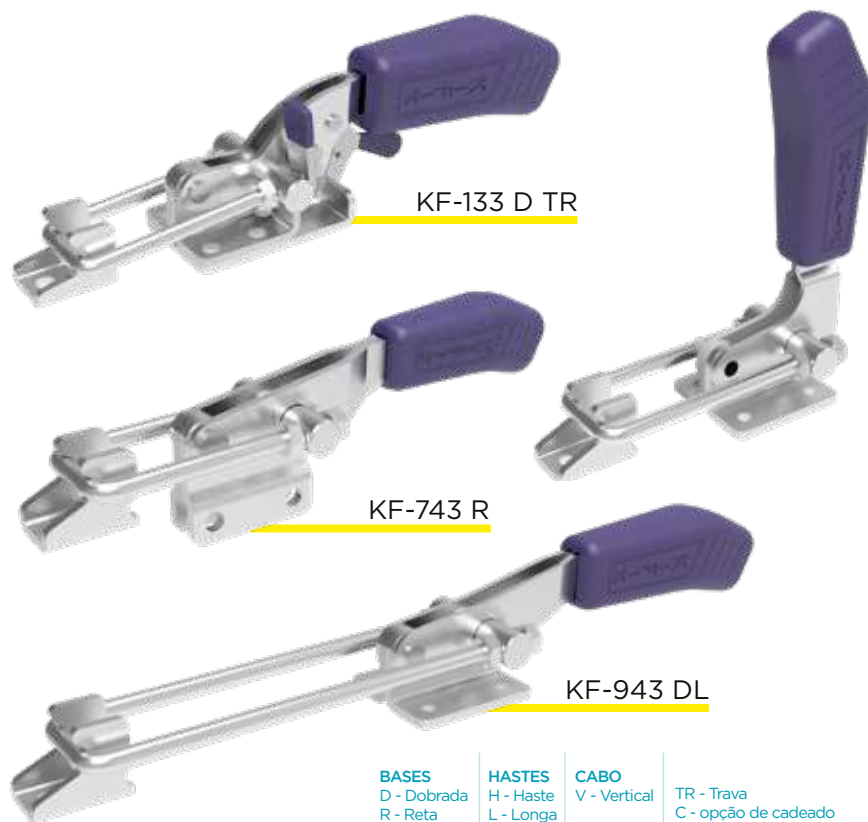
KF-314 D



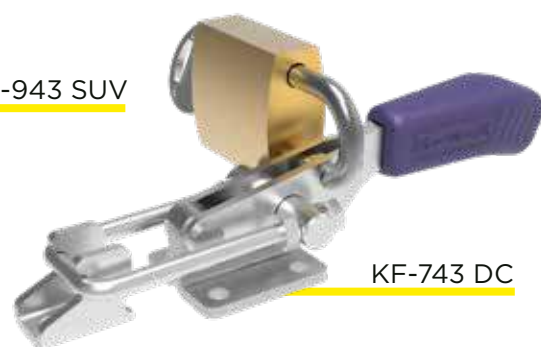
BASES
D - Dobrada
R - Retã

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F1 | F2 | G | J | Q | PESO KG |
|------------|-----------------------|-----|-----|----|----|----|----|----|----|-----|----|---------|
| KF-310 D | 170 | 48 | 176 | 33 | 19 | 33 | 35 | | 49 | 7 | 46 | 0,350 |
| KF-310 R | 170 | 57 | 176 | 42 | 19 | 6 | 35 | | | 7 | 46 | 0,350 |
| KF-314 D | 340 | 60 | 263 | 47 | 32 | 44 | 48 | | 60 | 8,5 | 74 | 0,830 |
| KF-314 R | 340 | 73 | 263 | 60 | 32 | 8 | 48 | | | 8,5 | 74 | 0,830 |
| KF-326 D | 340 | 60 | 263 | 47 | 32 | 44 | 48 | | 60 | 8,5 | 74 | 0,830 |
| KF-326 R | 340 | 73 | 263 | 60 | 32 | 8 | 48 | | | 8,5 | 74 | 0,830 |
| KF-320 | 800 | 103 | 282 | 25 | 32 | 44 | 50 | 76 | 64 | 8,5 | 42 | 1,250 |

GRAMPOS TENSORES

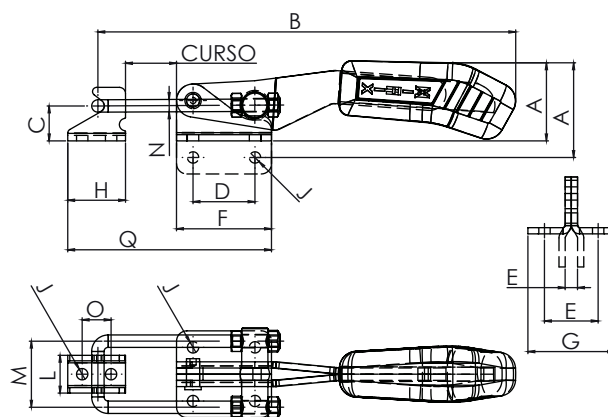


KF-943 SUV



KF-743 DC

CADEADO NÃO ACOMPANHA O GRAMPO



BASES
D - Dobrada
R - Retã

HASTES
H - Haste
L - Longa

CABO
V - Vertical

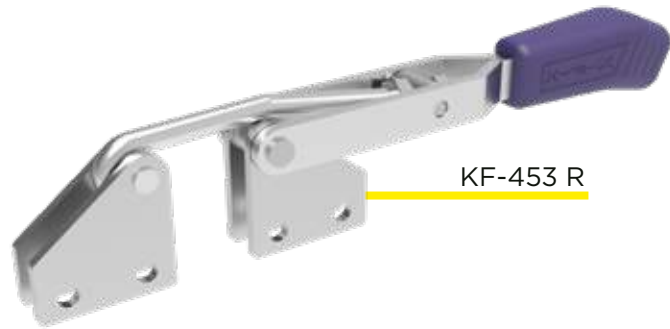
TR - Trava
C - opção de cadeado

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B MIN | B MAX | C | D | E | F | G | H | J | L | M | N | O | Q MIN | Q MAX | PESO KG |
|----------------|-----------------------|-------|-----|-------|-------|------|------|------|------|----|----|-----|-----|----|----|----|-------|-------|---------|
| KF-233 D | 160 | 32 | 31 | 112 | 126 | 10 | 16 | 19 | 26 | 28 | 20 | 4,3 | 13 | 19 | 4 | 10 | 46 | 60 | 0,120 |
| KF-233 R | 160 | 32 | 40 | 112 | 126 | 10 | 16 | 4 | 26 | | 20 | 4,3 | 13 | 19 | 4 | 10 | 46 | 60 | 0,120 |
| KF-233 D TR | 160 | 32 | 37 | 122 | 136 | 10 | 16 | 19 | 26 | 28 | 20 | 4,3 | 13 | 19 | 4 | 10 | 46 | 60 | 0,140 |
| KF-643 D | 200 | 48 | 56 | 139 | 155 | 14 | 24 | 22 | 36 | 33 | 23 | 5,5 | 16 | 25 | 5 | 11 | 59 | 75 | 0,230 |
| KF-643 DV | 200 | 48 | 121 | 73 | 89 | 14 | 24 | 22 | 36 | 33 | 23 | 5,5 | 16 | 25 | 5 | 11 | 59 | 75 | 0,215 |
| KF-643 DL | 150 | 48 | 56 | 139 | 210 | 14 | 24 | 22 | 36 | 33 | 23 | 5,5 | 16 | 25 | 5 | 11 | 59 | 130 | 0,240 |
| KF-643 R | 200 | 48 | 62 | 139 | 155 | 14 | 24 | 6 | 36 | | 23 | 5,5 | 16 | 25 | 5 | 11 | 59 | 75 | 0,230 |
| KF-643 RL | 150 | 48 | 62 | 139 | 210 | 14 | 24 | 6 | 36 | | 23 | 5,5 | 16 | 25 | 5 | 11 | 59 | 130 | 0,240 |
| KF-643 D TR | 200 | 48 | 59 | 139 | 155 | 14 | 24 | 22 | 36 | 33 | 23 | 5,5 | 16 | 25 | 5 | 11 | 74 | 90 | 0,290 |
| KF-743 D | 200 | 48 | 37 | 137 | 153 | 14 | 24 | 22 | 36 | 33 | 23 | 5,5 | 16 | 25 | 5 | 11 | 59 | 75 | 0,210 |
| KF-743 DL | 150 | 48 | 37 | 137 | 208 | 14 | 24 | 22 | 36 | 33 | 23 | 5,5 | 16 | 25 | 5 | 11 | 59 | 130 | 0,220 |
| KF-743 DC | 200 | 48 | 37 | 137 | 153 | 14 | 24 | 22 | 36 | 33 | 23 | 5,5 | 16 | 25 | 5 | 11 | 59 | 75 | 0,200 |
| KF-743 R | 200 | 48 | 42 | 137 | 153 | 14 | 24 | 6 | 36 | | 23 | 5,5 | 16 | 25 | 5 | 11 | 59 | 75 | 0,210 |
| KF-743 RL | 150 | 48 | 42 | 137 | 208 | 14 | 24 | 6 | 36 | | 23 | 5,5 | 16 | 25 | 5 | 11 | 59 | 130 | 0,220 |
| KF-133 D | 300 | 60 | 54 | 196 | 223 | 13 | 19 | 32 | 40 | 44 | 28 | 7,0 | 23 | 31 | 6 | 14 | 68 | 95 | 0,440 |
| KF-133 D TR | 300 | 60 | 57 | 196 | 223 | 13 | 19 | 32 | 40 | 44 | 28 | 7,0 | 23 | 31 | 6 | 14 | 68 | 95 | 0,530 |
| KF-843 D | 340 | 60 | 38 | 177 | 202 | 17 | 30 | 26 | 46 | 42 | 28 | 5,5 | 19 | 32 | 6 | 14 | 74 | 99 | 0,360 |
| KF-843 DC | 340 | 60 | 38 | 177 | 202 | 17 | 30 | 26 | 46 | 42 | 28 | 5,5 | 19 | 32 | 6 | 14 | 74 | 99 | 0,400 |
| KF-843 R | 340 | 60 | 55 | 177 | 202 | 17 | 30 | 6 | 46 | | 28 | 5,5 | 19 | 32 | 6 | 14 | 74 | 99 | 0,360 |
| KF-843 D TR | 340 | 60 | 40 | 169 | 194 | 17 | 30 | 26 | 46 | 42 | 28 | 5,5 | 19 | 32 | 6 | 14 | 74 | 99 | 0,420 |
| KF-943 D | 680 | 80 | 60 | 241 | 286 | 21 | 40 | 36 | 60 | 56 | 38 | 7,0 | 26 | 40 | 8 | 19 | 98 | 143 | 0,790 |
| KF-943 DC | 680 | 80 | 60 | 241 | 286 | 21 | 40 | 36 | 60 | 56 | 38 | 7,0 | 26 | 40 | 8 | 19 | 98 | 143 | 0,810 |
| KF-943 DL | 450 | 80 | 60 | 241 | 361 | 21 | 40 | 36 | 60 | 56 | 38 | 7,0 | 26 | 40 | 8 | 19 | 98 | 218 | 0,850 |
| KF-943 R | 680 | 80 | 72 | 241 | 286 | 21 | 40 | 8 | 60 | | 38 | 7,0 | 26 | 40 | 8 | 19 | 98 | 143 | 0,790 |
| KF-943 RL | 450 | 80 | 72 | 241 | 361 | 21 | 40 | 8 | 60 | | 38 | 7,0 | 26 | 40 | 8 | 19 | 98 | 218 | 0,850 |
| KF-943 D TR | 680 | 80 | 60 | 241 | 286 | 21 | 40 | 36 | 60 | 56 | 38 | 7,0 | 26 | 40 | 8 | 19 | 98 | 143 | 0,830 |
| KF-143 D | 890 | 80 | 73 | 207,4 | 225,4 | 21,3 | 41,3 | 38,1 | 60,5 | 54 | 38 | 8,5 | 26 | 40 | 8 | 19 | 98,6 | 116,6 | 0,720 |
| KF-143 D TR | 890 | 80 | 73 | 207,4 | 225,4 | 21,3 | 41,3 | 38,1 | 60,5 | 54 | 38 | 8,5 | 26 | 40 | 8 | 19 | 98,6 | 116,6 | 0,770 |
| KF-943 SUV | 1200 | 80 | 183 | 98 | 148 | 21 | 40 | 36 | 60 | 56 | 38 | 7,0 | 26 | 40 | 8 | 19 | 93 | 143 | 0,780 |
| KF-943 SU H150 | 1400 | 80 | 60 | 254 | 299 | 16 | 40 | 36 | 60 | 56 | 60 | 7,0 | 56 | 44 | 10 | 36 | 13 | 58 | 1,370 |
| KF-943 SU H220 | 1400 | 80 | 60 | 304 | 369 | 15 | 40 | 36 | 60 | 56 | 38 | 7,0 | 9,5 | 44 | 10 | | 161 | 226 | 1,280 |

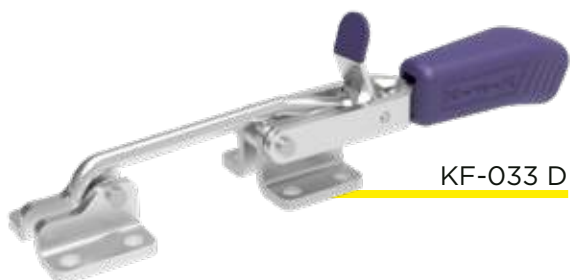
GRAMPOS TENSORES



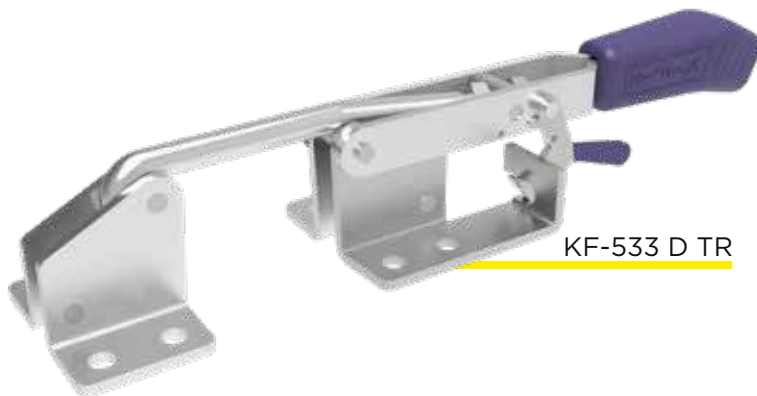
KF-453 D



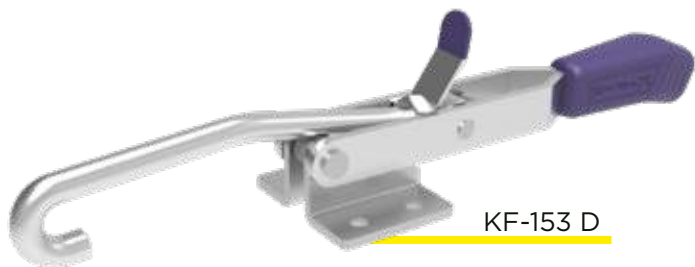
KF-453 R



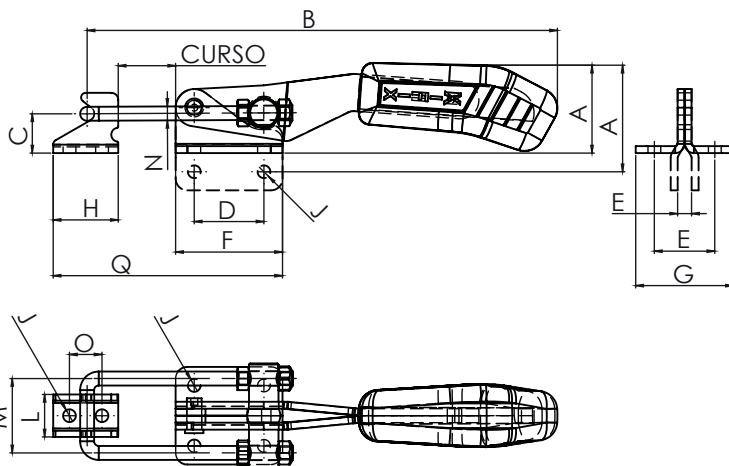
KF-033 D



KF-533 D TR



KF-153 D

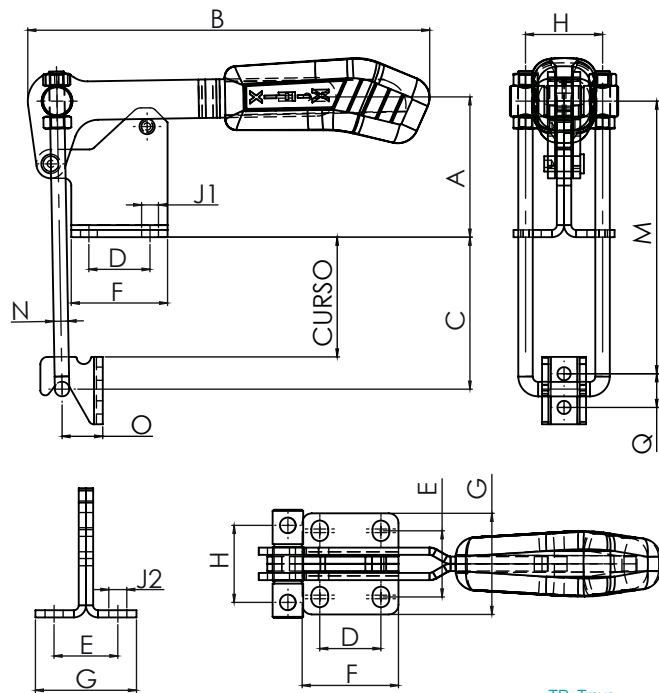


BASES
D - Dobrada
R - Retã

HASTES
L - Longa
TR - Trava

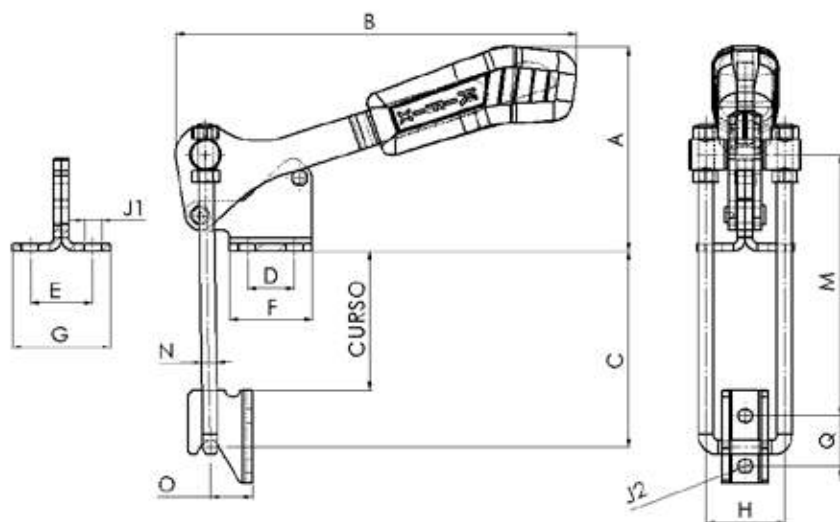
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | J | N | Q | R | PESO KG |
|-------------|-----------------------|------|-----|----|------|------|------|------|------|------|-----|------|---------|
| KF-033 D | 90 | 26 | 163 | 12 | 16 | 25,4 | 25,4 | 34 | 5,5 | 5,0 | 46 | 8,0 | 0,160 |
| KF-033 DL | 65 | 30 | 240 | 12 | 16 | 25,4 | 25,4 | 34 | 5,5 | 5,0 | 124 | 8,0 | 0,180 |
| KF-353 D | 120 | 35 | 215 | 18 | 25,4 | 25 | 35 | 38 | 5,5 | 6,0 | 40 | 8,0 | 0,300 |
| KF-353 R | 120 | 39 | 215 | 23 | 25,4 | 6,4 | 35 | | 5,5 | 6,0 | 40 | 8,0 | 0,300 |
| KF-353 D TR | 120 | 35 | 215 | 18 | 25,4 | 25 | 35 | 38 | 5,5 | 6,0 | 40 | 8,0 | 0,310 |
| KF-153 D | 170 | 35 | 241 | 19 | 19,1 | 35 | 38,1 | 49,3 | 5,5 | 8,0 | | 5,0 | 0,330 |
| KF-153 D TR | 170 | 35 | 251 | 19 | 19,1 | 35 | 38,1 | 49,3 | 5,5 | 8,0 | | 5,0 | 0,370 |
| KF-153 R | 170 | 44,2 | 265 | 28 | 19,1 | 8 | 38,1 | | 5,5 | 8,0 | | 5,0 | 0,330 |
| KF-453 D | 340 | 40 | 248 | 25 | 25,4 | 36 | 45 | 51 | 7 | 8,0 | 44 | 10,0 | 0,550 |
| KF-453 R | 340 | 48 | 248 | 32 | 25,4 | 10 | 45 | | 7 | 8,0 | 44 | 10,0 | 0,550 |
| KF-453 D TR | 340 | 40 | 248 | 25 | 25,4 | 36 | 45 | 51 | 7 | 8,0 | 44 | 10,0 | 0,570 |
| KF-553 D | 900 | 72 | 367 | 51 | 28,5 | 60,5 | 54 | 85,5 | 10,6 | 12,0 | 90 | 10,0 | 1,550 |
| KF-553 R | 900 | 88 | 367 | 67 | 28,5 | 13,5 | 54 | | 10,6 | 12,0 | 90 | 10,0 | 1,550 |
| KF-553 D TR | 900 | 72 | 367 | 51 | 28,5 | 60,5 | 54 | 85,5 | 10,6 | 12,0 | 90 | 10,0 | 1,650 |

GRAMPOS TENSORES



TR - Trava

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C MAX | D | E | F | G | H | J1 | J2 | M MIN | M MAX | N | O | Q | PESO KG |
|------------|-----------------------|-------|----|-----|-------|------|------|----|------|----|-----|------|-------|-------|---|----|----|---------|
| KF-063 | 200 | 40 | 41 | 129 | 72 | 24 | 26 | 35 | 37,5 | 25 | 6,0 | 8,0 | 45 | 105 | 5 | 13 | 11 | 0,250 |
| KF-063 TR | 200 | 40 | 44 | 137 | 76 | 24 | 26 | 35 | 37,5 | 25 | 6,0 | 8,0 | 45 | 105 | 5 | 13 | 11 | 0,320 |
| KF-163 | 340 | 50 | 58 | 167 | 58 | 25,4 | 27,5 | 40 | 42 | 32 | 7,0 | 8,5 | 63 | 108 | 6 | 16 | 14 | 0,430 |
| KF-263 | 680 | 80 | 52 | 213 | 78 | 32 | 33 | 50 | 55 | 38 | 8,5 | 12,0 | 67 | 127 | 8 | 22 | 19 | 0,930 |
| KF-263 TR | 680 | 80 | 55 | 228 | 74 | 32 | 33 | 50 | 55 | 38 | 8,5 | 12,0 | 71 | 127 | 8 | 22 | 19 | 1,090 |

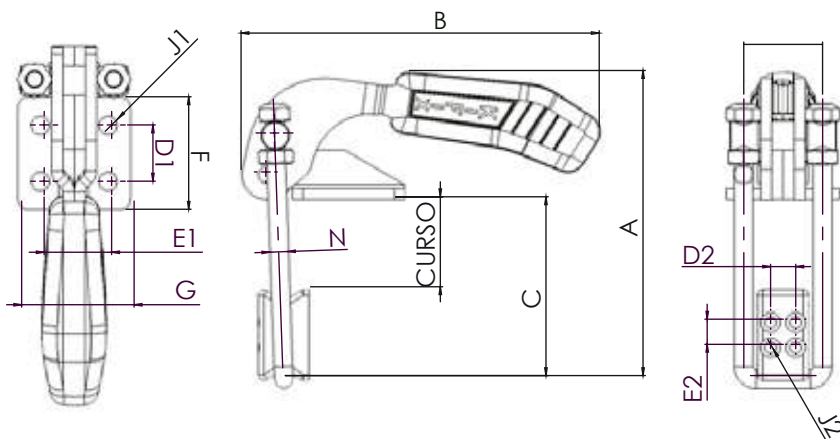


| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C MAX | D | E | F | G | H | J1 | J2 | M MIN | M MAX | N | O | Q | PESO KG |
|------------|-----------------------|-------|----|-----|-------|------|------|------|------|----|-----|-----|-------|-------|---|----|------|---------|
| KF-423 | 220 | 32 | 77 | 122 | 83 | 12,7 | 22,4 | 25,4 | 35,1 | 25 | 5,1 | 4,3 | 35 | 102 | 5 | 14 | 14,2 | 0,230 |
| KF-433 | 450 | 32 | 84 | 162 | 80 | 19,1 | 25,4 | 33,3 | 39,6 | 32 | 7,1 | 5,6 | 50 | 107 | 6 | 17 | 20,6 | 0,400 |
| KF-443 | 890 | 32 | 93 | 194 | 88 | 31,8 | 36,6 | 49,3 | 53,8 | 38 | 8,6 | 8,6 | 65 | 119 | 8 | 21 | 27 | 0,890 |

GRAMPOS TENSORES



KF-473 D

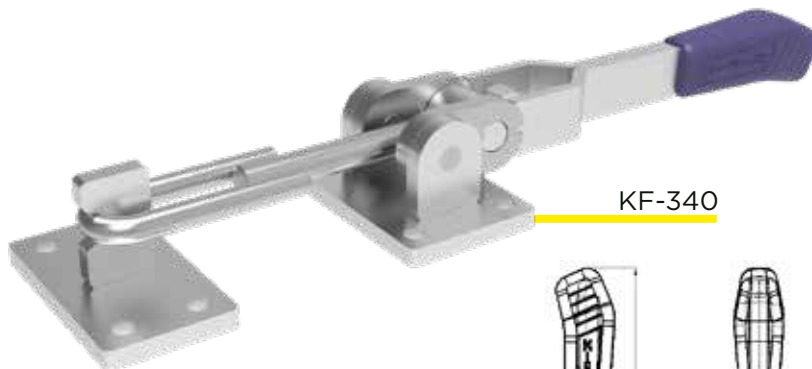


D - Dobrada

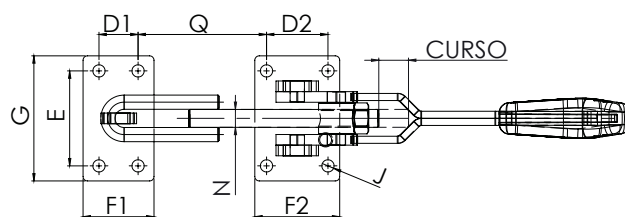
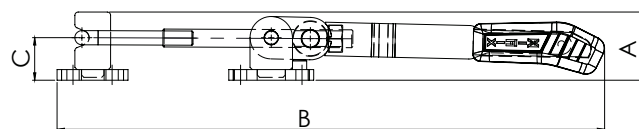
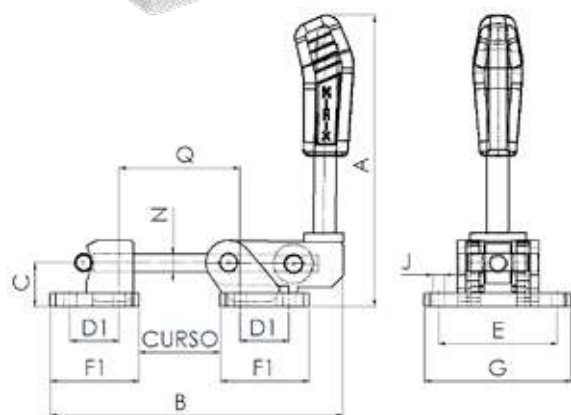
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C | D1 | D2 | E1 | E2 | F | G | H | J1 | J2 | N | PESO KG |
|------------|-----------------------|-------|-----|-----|-----|------|------|------|------|------|------|------|------|-----|----|---------|
| KF-473 D | 1800 | 44 | 172 | 202 | 101 | 31,8 | 14,2 | 38,1 | 14,2 | 63,5 | 63,5 | 44,5 | 10,3 | 6,4 | 10 | 1,500 |



KF-330



KF-340



KF-350

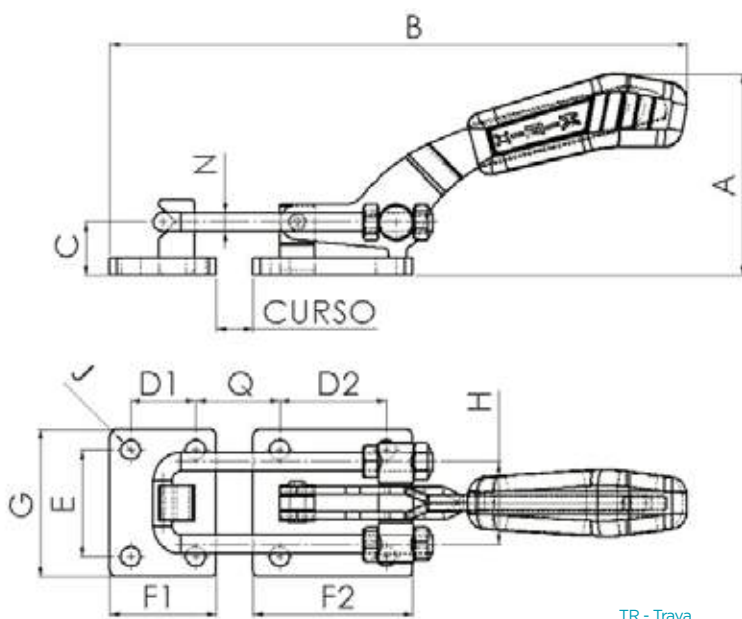
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B MAX | C | D1 | D2 | E | F1 | F2 | G | J | N | Q | PESO KG |
|------------|-----------------------|-------|-----|-------|------|----|----|----|------|----|-----|-----|------|-----|---------|
| KF-330 | 1500 | 48 | 208 | 209 | 31 | 35 | | 85 | 63,5 | | 105 | 8,5 | 12,7 | 86 | 2,960 |
| KF-350 | 1800 | 50 | 246 | 239 | 44 | 35 | | 94 | 60 | | 120 | 11 | 16 | 80 | 3,970 |
| KF-340 | 2500 | 53 | 61 | 490 | 38,1 | 35 | 55 | 85 | 63,5 | 76 | 112 | 11 | 16 | 115 | 3,200 |

GRAMPOS TENSORES



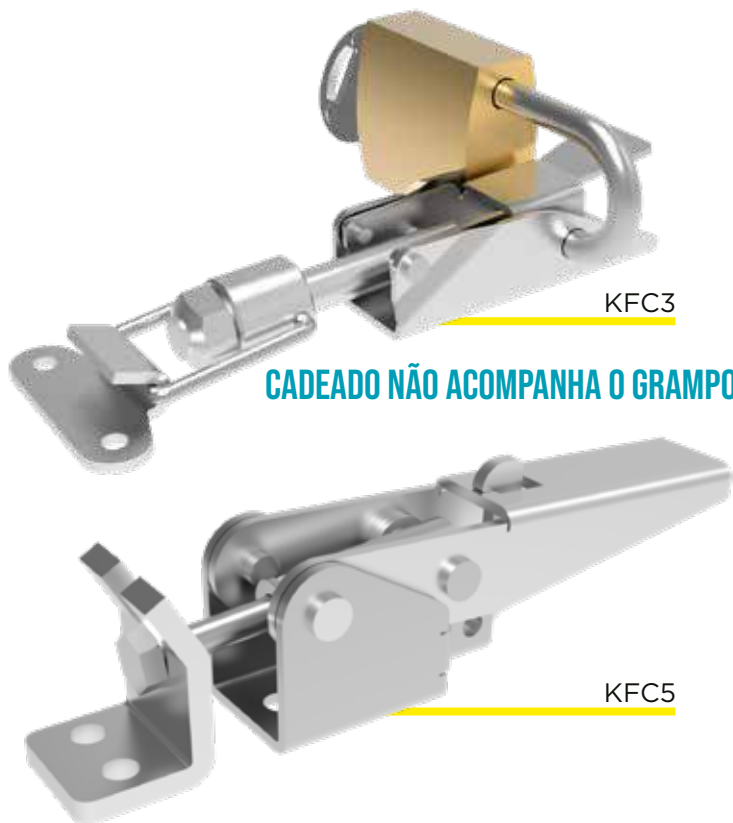
KF-385

KF-375 TR



TR - Trava

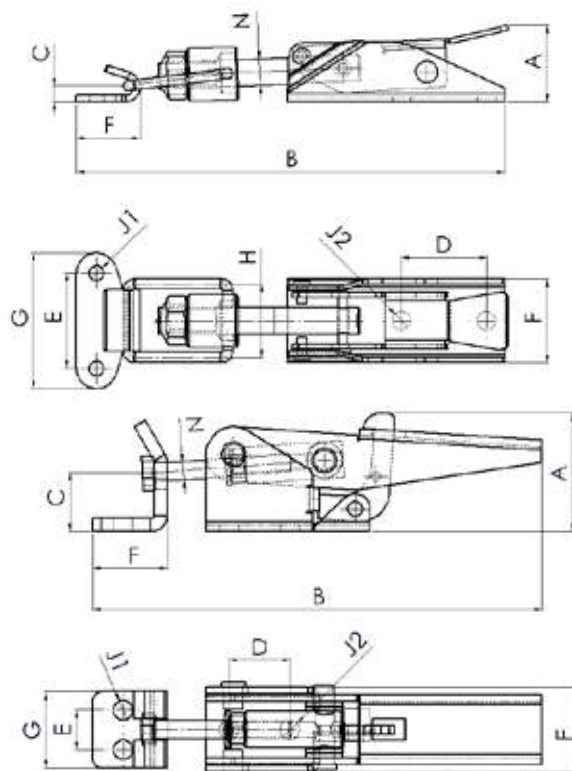
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B MAX | C | D1 | D2 | E | F1 | F2 | G | H | J | N | Q | PESO KG |
|------------|-----------------------|-------|-----|-------|----|----|------|------|----|----|----|----|------|------|----|---------|
| KF-375 | 1500 | 105 | 109 | 310 | 29 | 35 | 57,2 | 57,2 | 57 | 86 | 80 | 45 | 10,5 | 10 | 45 | 1,800 |
| KF-375 TR | 1500 | 105 | 117 | 326 | 29 | 35 | 57,2 | 57,2 | 57 | 86 | 80 | 45 | 10,5 | 10 | 45 | 2,140 |
| KF-385 | 3400 | 105 | 106 | 310 | 29 | 35 | 57,2 | 57,2 | 57 | 86 | 80 | 54 | 10,5 | 12 | 50 | 2,200 |
| KF-385 TR | 3400 | 105 | 110 | 335 | 29 | 35 | 57,2 | 57,5 | 57 | 86 | 80 | 54 | 10,5 | 10,5 | 50 | 2,500 |



KFC3

CADEADO NÃO ACOMPANHA O GRAMPO

KFC5



| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C | D | E | F | G | H | J1 | J2 | N | PESO KG |
|------------|-----------------------|-------|------|-----|------|------|------|------|------|----|-----|-----|---|---------|
| KFC3 | 3 | 24 | 23 | 128 | 5 | 25,5 | 28,5 | 19 | 40,5 | 22 | 4,4 | 5,5 | 8 | 0,130 |
| KFC5 | 180 | 60 | 38,9 | 148 | 17,5 | 20 | 13 | 24,5 | 25 | 0 | 6,4 | 6,4 | 6 | 0,235 |

GRAMPOS TENSORES COM CINTA



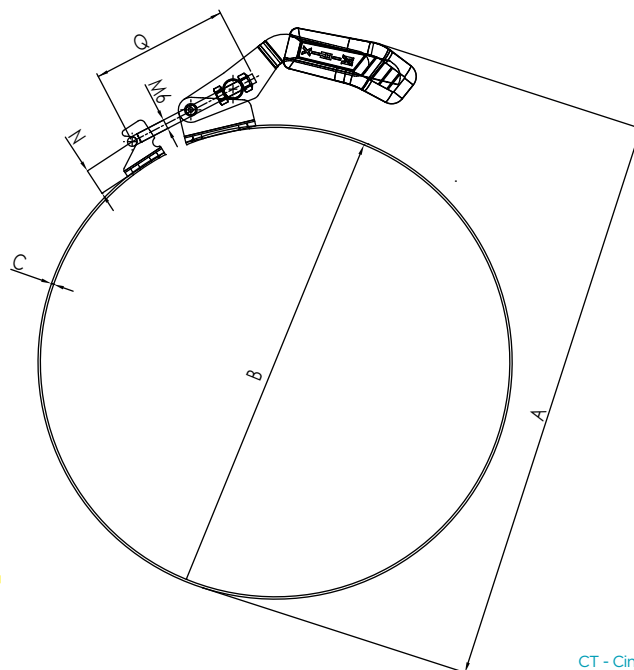
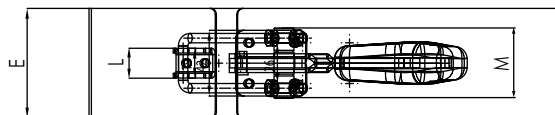
KF-743 CT 50



KF-743 CT 112



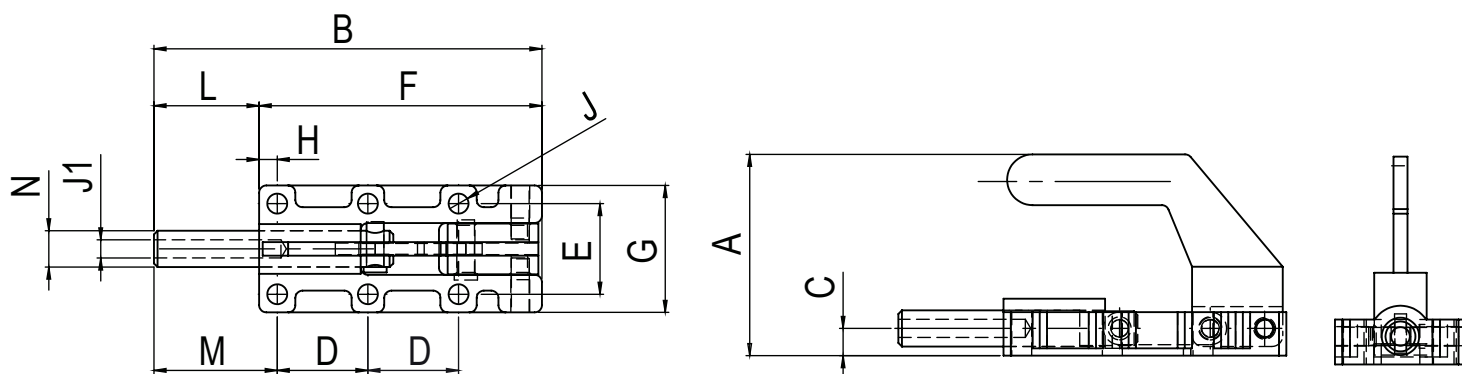
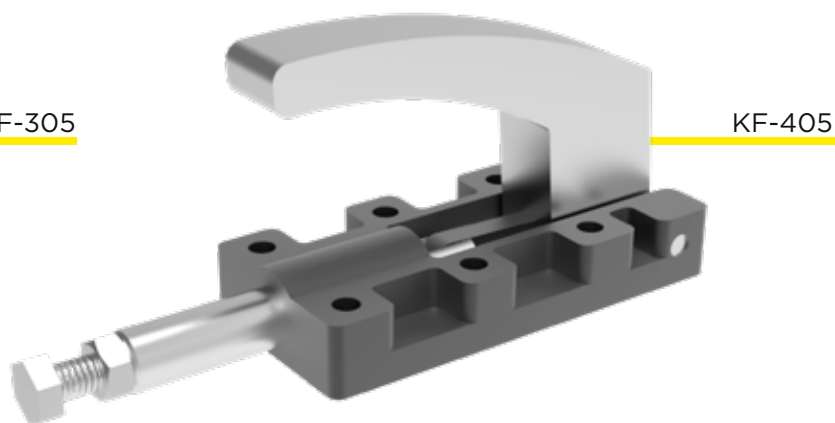
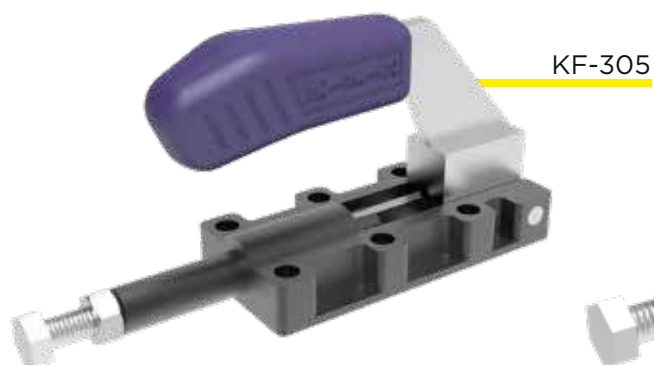
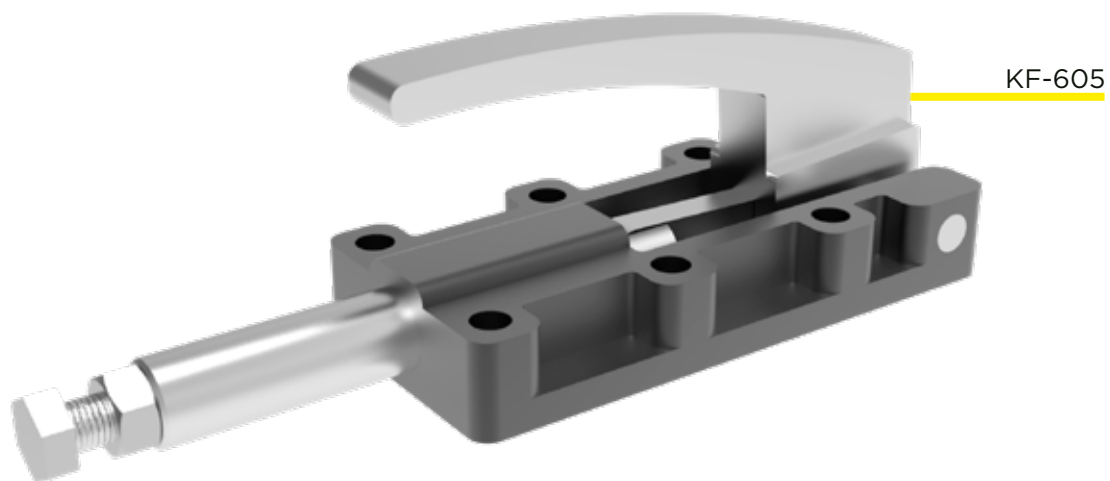
KF-743 CT 200



CT - Cinta

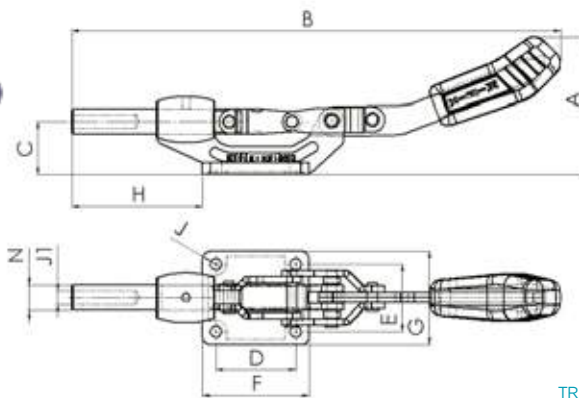
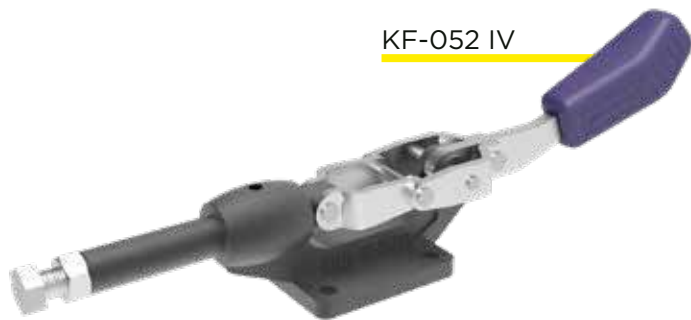
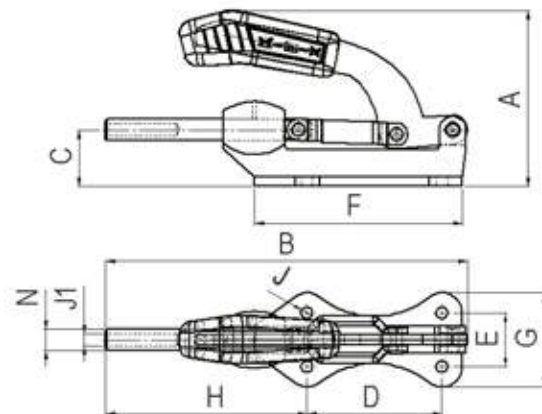
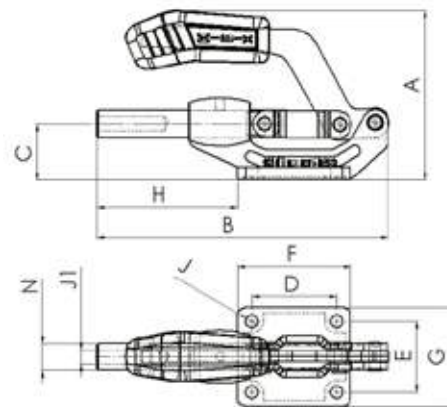
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C | E | L | M | N | Q | PESO KG |
|----------------|-----------------------|-------|-------|-----|-----|----|------|----|---|----|---------|
| KF-233 CT 50 | 160 | 14 | 100 | 50 | 1,5 | 25 | 4,3 | 19 | 4 | 53 | 0,153 |
| KF-233 CT 75 | 160 | 14 | 101 | 75 | 1,5 | 25 | 4,3 | 19 | 4 | 55 | 0,176 |
| KF-743 CT 100 | 200 | 16 | 99 | 100 | 1,5 | 20 | 6,35 | 25 | 5 | 71 | 0,270 |
| KF-7432 CT 112 | 200 | 16 | 159,6 | 112 | 1,5 | 20 | 6,35 | 25 | 5 | 71 | 0,285 |
| KF-743 CT 120 | 200 | 16 | 168 | 120 | 1,5 | 20 | 6,35 | 25 | 5 | 71 | 0,294 |
| KF-743 CT 150 | 200 | 16 | 123 | 150 | 1,5 | 20 | 6,35 | 25 | 5 | 70 | 0,325 |
| KF-743 CT200 | 200 | 16 | 236 | 200 | 1,5 | 30 | 6,35 | 25 | 5 | 65 | 0,390 |
| KF-743 CT 250 | 200 | 16 | 283 | 250 | 1,5 | 20 | 6,35 | 25 | 5 | 70 | 0,440 |
| KF-843 CT 300 | 200 | 16 | 365 | 200 | 1,5 | 70 | 19 | 70 | 6 | 90 | 1,145 |

GRAMPOS TORPEDOS



| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C | D | E | F | G | H | J | J1 | L | M | N | PESO KG |
|------------|-----------------------|-------|----|-----|-----|----|----|-----|----|-----|------|----------|------|----|----|---------|
| KF-305 | 250 | 25 | 60 | 105 | 7,5 | 25 | 25 | 78 | 35 | 5 | 5,5 | M6X1,00 | 26,5 | 32 | 10 | 0,350 |
| KF-405 | 500 | 35 | 73 | 148 | 10 | 35 | 35 | 111 | 51 | 8,5 | 6,5 | M8X1,25 | 37 | 46 | 14 | 1,100 |
| KF-505 | 750 | 50 | 78 | 190 | 14 | 45 | 45 | 141 | 66 | 10 | 8,5 | M12X1,75 | 50 | 60 | 19 | 1,820 |
| KF-605 | 1200 | 60 | 84 | 238 | 16 | 55 | 55 | 171 | 76 | 10 | 10,5 | M12X1,75 | 67 | 77 | 22 | 2,870 |

GRAMPOS TORPEDOS



TR - Trava
IV - Ação Invertida
RF - Base Reforçada

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C | D | E | F | G | H | J | J1 | N | PESO KG |
|------------|-----------------------|-------|-------|------|------|------|------|------|------|------|------|----------|------|---------|
| KF-061 | 50 | 16 | 51,3 | 66,1 | 13,7 | 16 | 16 | 35,4 | 26,7 | 22,5 | 4,3 | M4X0,70 | 6,35 | 0,070 |
| KF-057 | 230 | 36 | 82 | 144 | 25 | 35 | 40 | 50 | 55 | 71 | 7,0 | M8X1,25 | 12 | 0,400 |
| KF-057 TR | 230 | 36 | 98 | 144 | 25 | 35 | 40 | 50 | 55 | 71 | 7,0 | M8X1,25 | 12 | 0,420 |
| KF-057 IV | 230 | 35 | 34 | 239 | 25 | 35 | 40 | 50 | 55 | 71 | 7,0 | M8X1,25 | 12 | 0,395 |
| KF-051 | 270 | 35 | 92,2 | 125 | 24,8 | 36,6 | 33,3 | 58 | 48 | 57 | 6,3 | M8X1,25 | 12 | 0,390 |
| KF-054 | 380 | 41 | 107,9 | 154 | 31,8 | 41,4 | 41,4 | 58,7 | 57,2 | 42,2 | 8,5 | M10X1,50 | 16 | 0,890 |
| KF-053 | 500 | 83 | 127 | 268 | 42 | 100 | 40 | 154 | 70 | 149 | 8,5 | M10X1,50 | 16 | 2,150 |
| KF-053 TR | 500 | 83 | 134 | 268 | 42 | 100 | 40 | 154 | 70 | 149 | 8,5 | M10X1,50 | 16 | 2,220 |
| KF-052 | 700 | 50 | 116 | 205 | 40 | 60 | 50 | 80 | 70 | 99 | 8,5 | M12X1,75 | 19 | 1,280 |
| KF-052 TR | 700 | 50 | 137 | 205 | 40 | 60 | 50 | 80 | 70 | 99 | 8,5 | M12X1,75 | 19 | 1,710 |
| KF-052 IV | 700 | 52 | 103 | 368 | 40 | 60 | 50 | 80 | 70 | 98 | 8,5 | M12X1,75 | 19 | 1,590 |
| KF-052 RF | 1200 | 50 | 120 | 205 | 40 | 60 | 50 | 80 | 70 | 99 | 8,5 | M12X1,75 | 19 | 1,660 |
| KF-056 | 1800 | 78 | 150 | 287 | 57 | 100 | 60 | 162 | 86 | 162 | 10,5 | M16X2,00 | 25 | 3,500 |

GRAMPOS TORPEDOS COM ALÇA



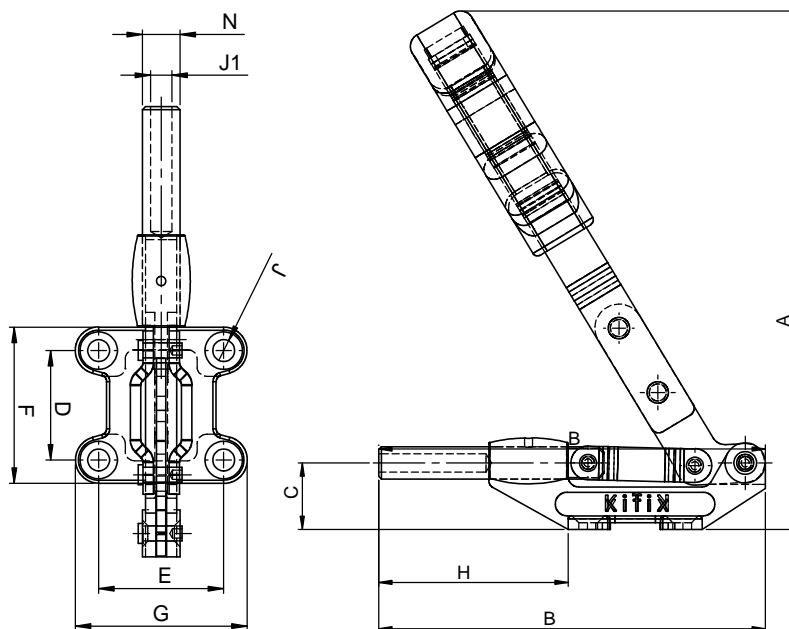
KF-054 AL



KF-052 AL



KF-057 AL



AL - Alça

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C | D | E | F | G | H | J | J1 | N | PESO |
|------------|-----------------------|-------|-----|-----|----|------|------|------|------|------|-----|----------|----|-------|
| KF-052 AL | 700 | 50 | 215 | 205 | 40 | 60 | 50 | 80 | 70 | 99 | 8,5 | M12X1,75 | 19 | 1,55 |
| KF-054 AL | 380 | 41 | 196 | 154 | 40 | 41,4 | 41,4 | 58,7 | 57,2 | 42,2 | 8,5 | M10X1,50 | 16 | 1,205 |
| KF-057 AL | 230 | 36 | 193 | 144 | 25 | 35 | 40 | 50 | 55 | 71 | 7 | M8X1,25 | 12 | 0,82 |

GRAMPO TORPEDO COM GIRO

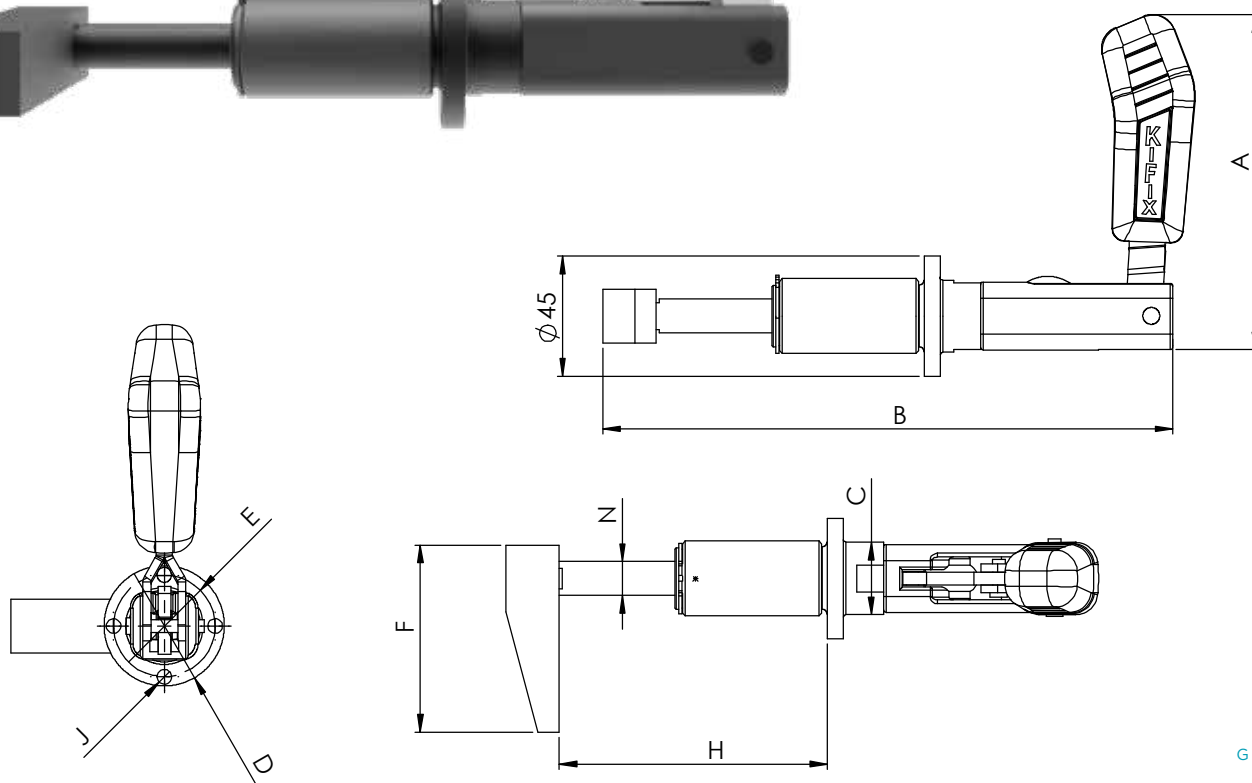
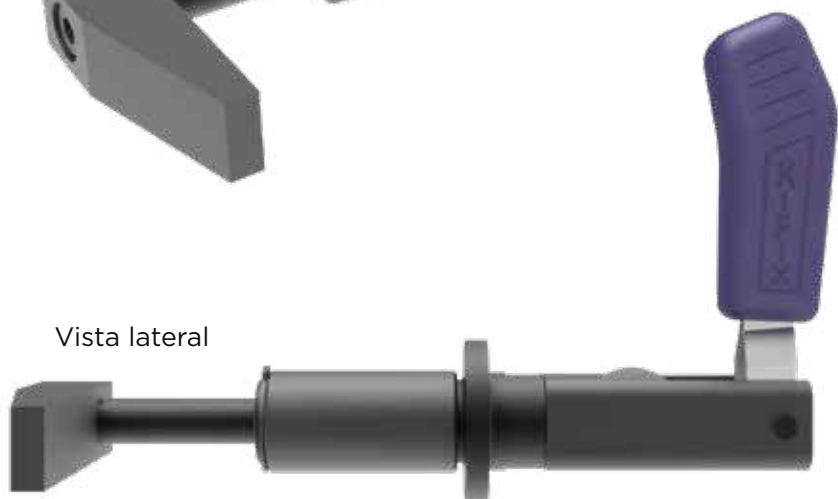
COM OPÇÃO DE GIRO PARA A DIREITA E PARA A ESQUERDA

KF-007 G

Vista superior



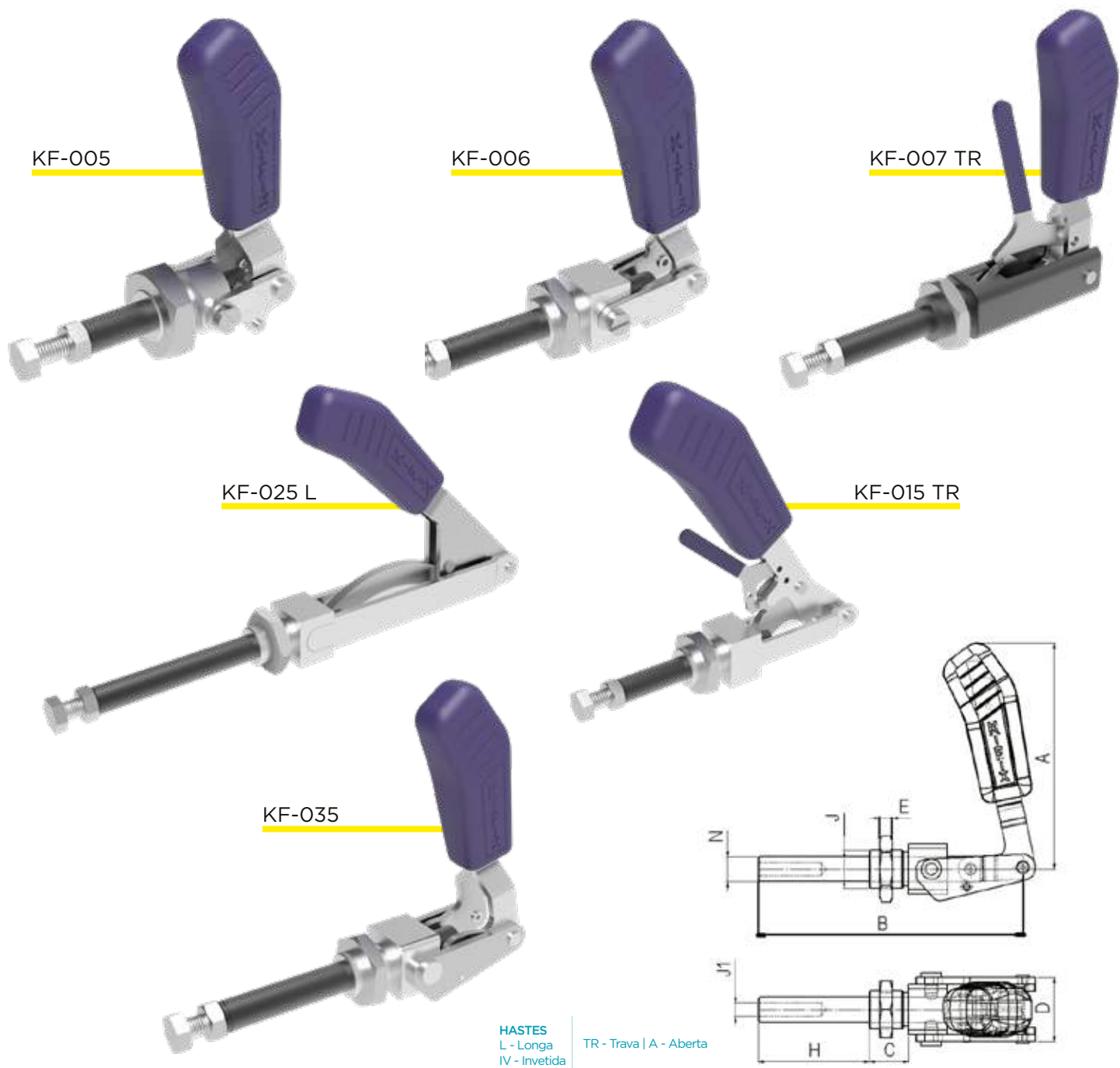
Vista lateral



G - Giro

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C | D | E | F | H | J | N | PESO KG |
|------------|-----------------------|-------|-----|-----|----|----|----|----|-----|-----|------|---------|
| KF-007 G | 200 | 42 | 125 | 213 | 27 | 45 | 38 | 70 | 100 | 5,5 | 12,7 | 0,925 |

GRAMPOS TORPEDOS FRONTAIS

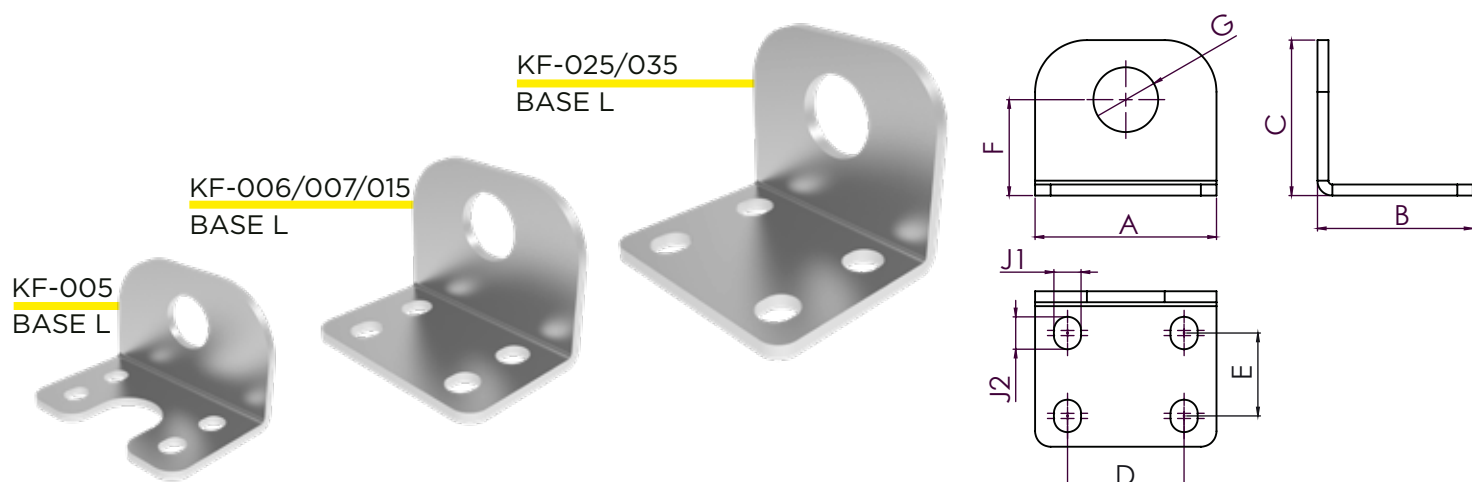


HASTES
L - Longa
IV - Invetida

TR - Trava | A - Aberta

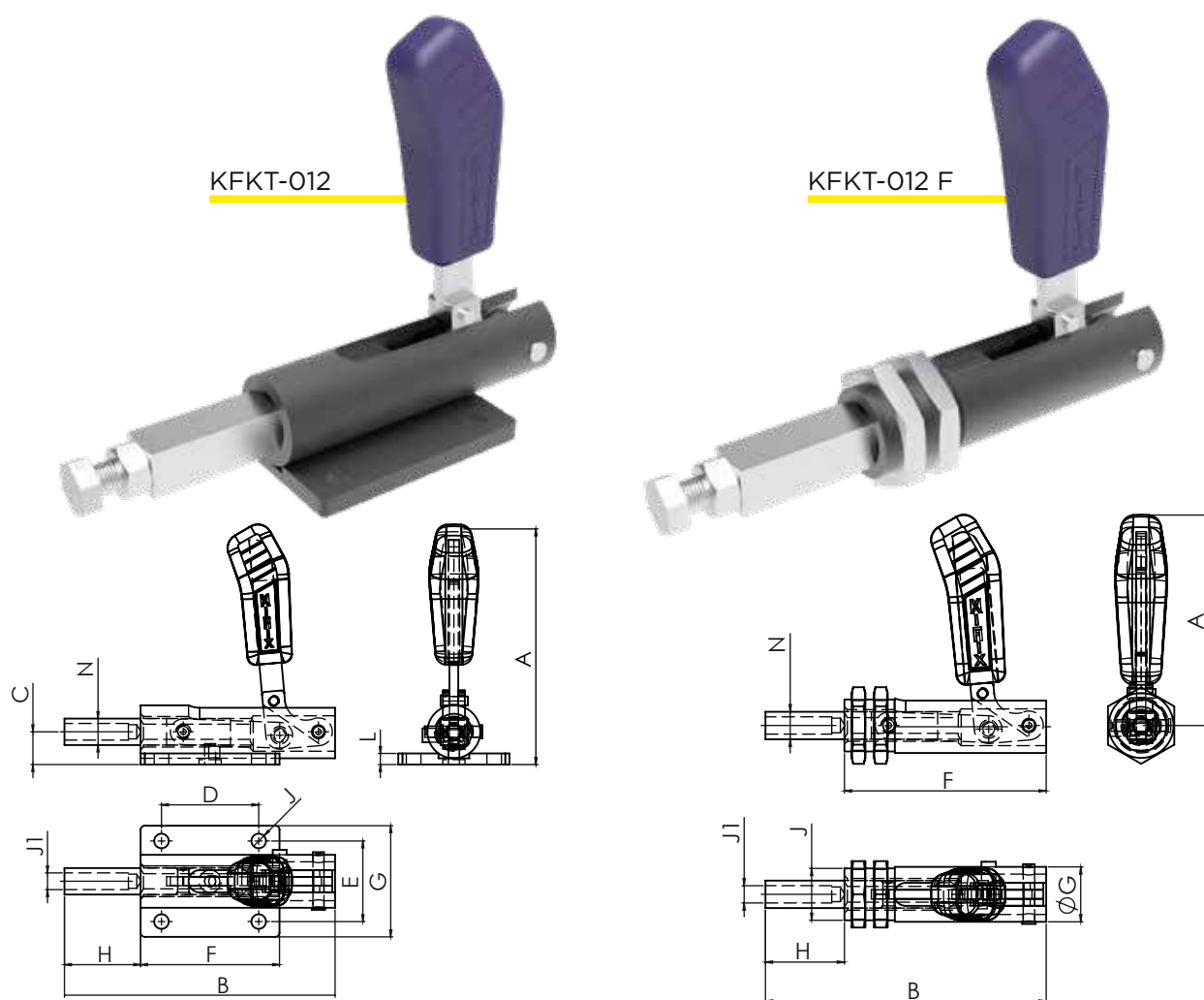
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C | D | E | H | J | J1 | N | PESO KG |
|-------------|-----------------------|-------|-----|-----|------|------|-----|-----|----------|----------|------|---------|
| KF-005 | 90 | 20 | 79 | 60 | 12 | 26 | 6 | 21 | M16X1,50 | M6X1,00 | 9,5 | 0,190 |
| KF-006 | 120 | 39 | 107 | 105 | 16,5 | 31 | 7 | 39 | M20X1,50 | M8X1,25 | 12 | 0,420 |
| KF-009 | 150 | 60 | 109 | 138 | 16,5 | 31 | 7 | 62 | M20X1,50 | M8X1,25 | 12 | 0,460 |
| KF-007 | 200 | 41 | 125 | 125 | 18 | 25,4 | 7 | 42 | M20X1,50 | M8X1,25 | 12,7 | 0,490 |
| KF-007 TR | 200 | 41 | 135 | 125 | 18 | 25,4 | 7 | 42 | M20X1,50 | M8X1,25 | 12,7 | 0,515 |
| KF-007 TR A | 200 | 41 | 135 | 125 | 18 | 25,4 | 7 | 43 | M20X1,50 | M8X1,25 | 12,7 | 0,508 |
| KF-015 | 250 | 34 | 115 | 137 | 20 | 25 | 8,5 | 35 | M20X1,50 | M8X1,25 | 12 | 0,470 |
| KF-015 TR | 250 | 34 | 142 | 137 | 20 | 25 | 8,5 | 35 | M20X1,50 | M8X1,25 | 12 | 0,540 |
| KF-015 IV | 250 | 34 | 125 | 142 | 20 | 25 | 8,5 | 35 | M20X1,50 | M8X1,50 | 12 | 0,460 |
| KF-025 | 500 | 40 | 132 | 180 | 25 | 32 | 10 | 47 | M24X2,00 | M10X1,50 | 16 | 0,990 |
| KF-025 TR | 500 | 40 | 132 | 180 | 25 | 32 | 10 | 47 | M24X2,00 | M10X1,50 | 16 | 1,020 |
| KF-025 L | 300 | 99 | 151 | 316 | 25 | 32 | 10 | 102 | M24X2,00 | M10X1,50 | 16 | 1,400 |
| KF-035 | 320 | 66 | 143 | 175 | 25 | 40 | 10 | 70 | M24X2,00 | M10X1,50 | 16 | 0,920 |
| KF-035 TR | 320 | 66 | 143 | 175 | 25 | 40 | 10 | 70 | M24X2,00 | M10X1,50 | 16 | 0,980 |

GRAMPOS TORPEDOS FRONTAIS



| REFERÊNCIA | A | B | C | D | E | F | G | J1 | J2 | PESO KG |
|-----------------------|----|----|----|----|----|----|------|------|------|---------|
| KF-005 BASE L | 60 | 40 | 40 | 40 | 16 | 24 | 16,5 | 8,5 | 8,5 | 0,075 |
| KF-006/007/015 BASE L | 65 | 44 | 50 | 40 | 20 | 33 | 20,5 | 8,5 | 10,5 | 0,140 |
| KF-025/035 BASE L | 70 | 60 | 60 | 45 | 32 | 37 | 25 | 10,5 | 12,5 | 0,250 |

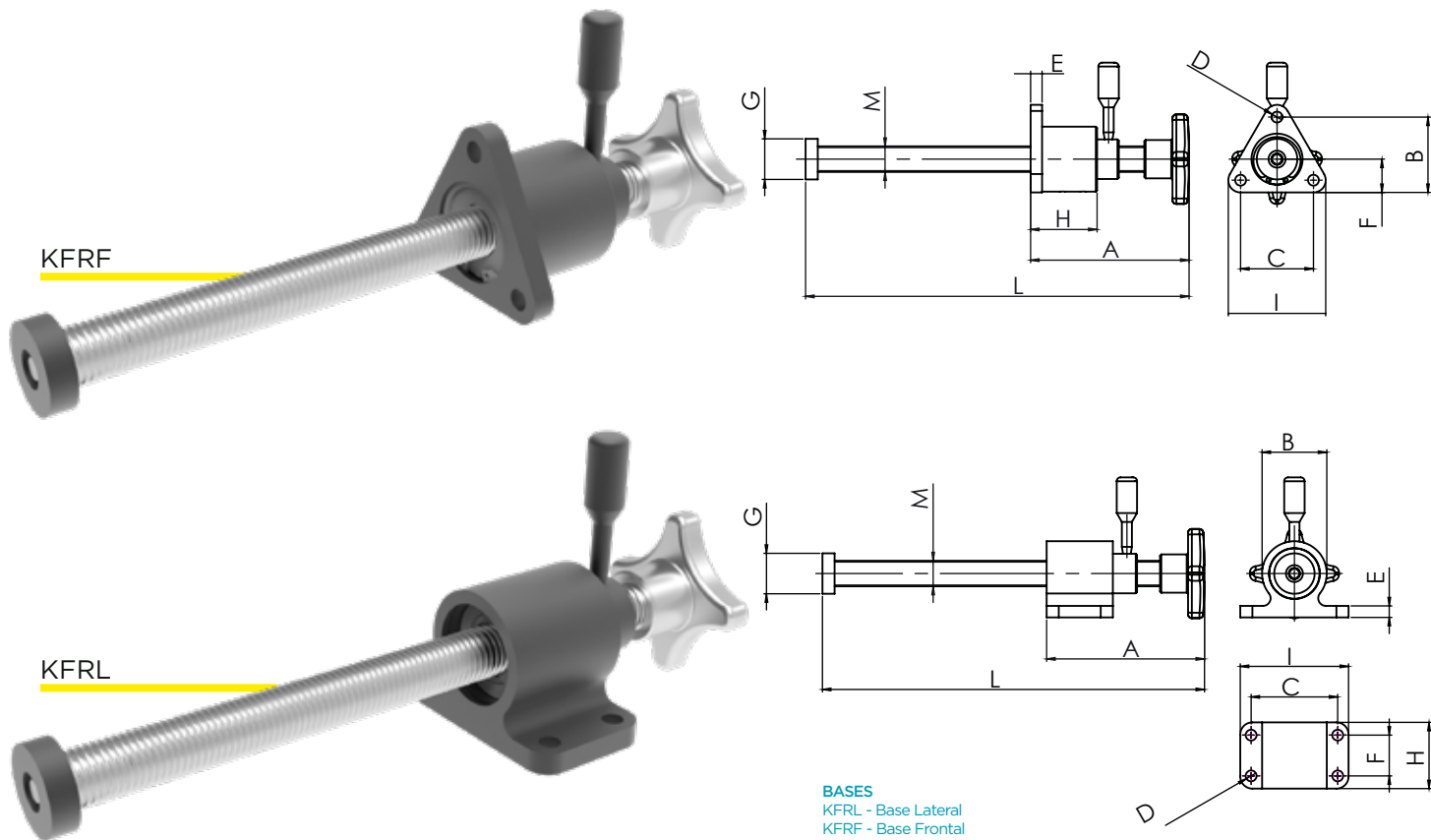
GRAMPOS TORPEDOS COM HASTE QUADRADA



BASES
F - Frontal

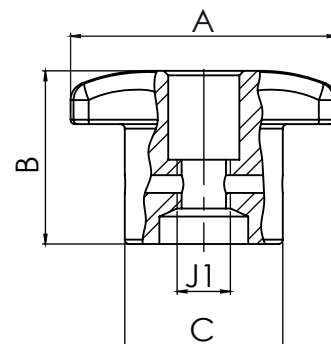
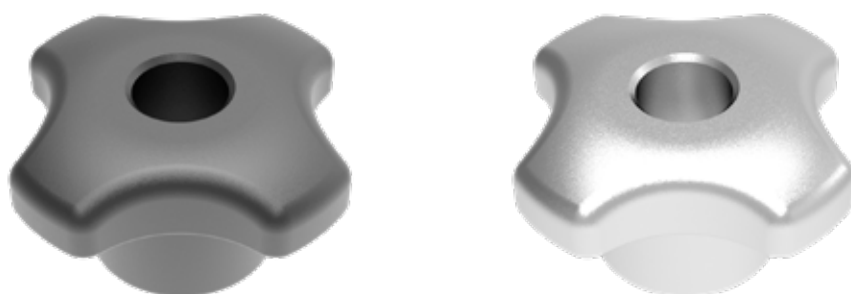
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | CURSO | A | B | C | D | E | F | G | H | J | J1 | L | N | PESO KG |
|------------|-----------------------|-------|-----|-----|------|----|----|-----|------|----|---------|----------|---|----|---------|
| KFKT-012 | 900 | 48 | 173 | 195 | 23,6 | 70 | 58 | 100 | 80 | 55 | 10,5 | M12X1,75 | 8 | 19 | 1,850 |
| KFKT-012 F | 900 | 48 | 146 | 195 | | | | 140 | 38,1 | 55 | M36X1,5 | M12X1,75 | | 19 | 1,530 |

FUSOS RÁPIDOS



| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | I | L | M | PESO KG |
|------------|-----------------------|------|------|------|-----|---|------|----|----|------|-------|----------|---------|
| KFRL-12 | 500 | 64,5 | 35 | 45 | 5,5 | 6 | 20 | 19 | 32 | 55 | 175,4 | M12x1,75 | 0,48 |
| KFRF-12 | 500 | 64,5 | 38,9 | 38 | 5,5 | 6 | 17 | 19 | 32 | 50 | 175,4 | M12x1,75 | 0,42 |
| KFRL-16 | 750 | 93,7 | 40 | 53 | 7 | 8 | 28 | 25 | 40 | 65 | 249 | M16x2,00 | 0,92 |
| KFRF-16 | 750 | 93,7 | 50 | 48,5 | 7 | 8 | 22 | 25 | 40 | 64,5 | 249 | M16x2,00 | 0,82 |
| KFRL-20 | 1500 | 116 | 50,8 | 68 | 8,5 | 9 | 32 | 32 | 52 | 85 | 292 | M20x2,00 | 1,95 |
| KFRF-20 | 1500 | 116 | 59 | 57 | 8,5 | 9 | 26,1 | 32 | 52 | 76 | 292 | M20x2,00 | 1,75 |

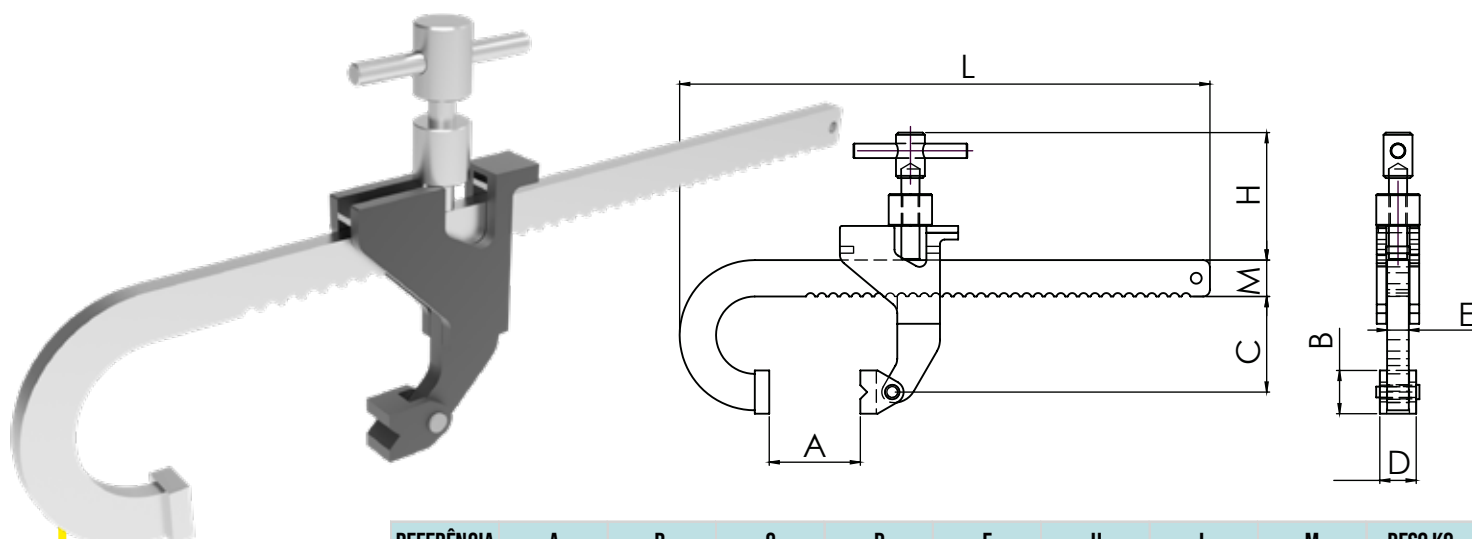
MANÍPULOS



ACABAMENTOS DISPONÍVEIS:
 Zincado Branco
 Oxidado Preto

| REFERÊNCIA | A | B | C | J1 | PESO KG |
|------------|----|----|------|----------|---------|
| KFM-6 | 30 | 16 | 16 | M6x1,0 | 0,055 |
| KFM-8 | 41 | 20 | 19,5 | M8x1,25 | 0,105 |
| KFM-10 | 48 | 24 | 22 | M10x1,5 | 0,165 |
| KFM-12 | 67 | 30 | 26 | M12x1,75 | 0,305 |
| KFM-16 | 80 | 45 | 40 | M16x2,00 | 0,575 |

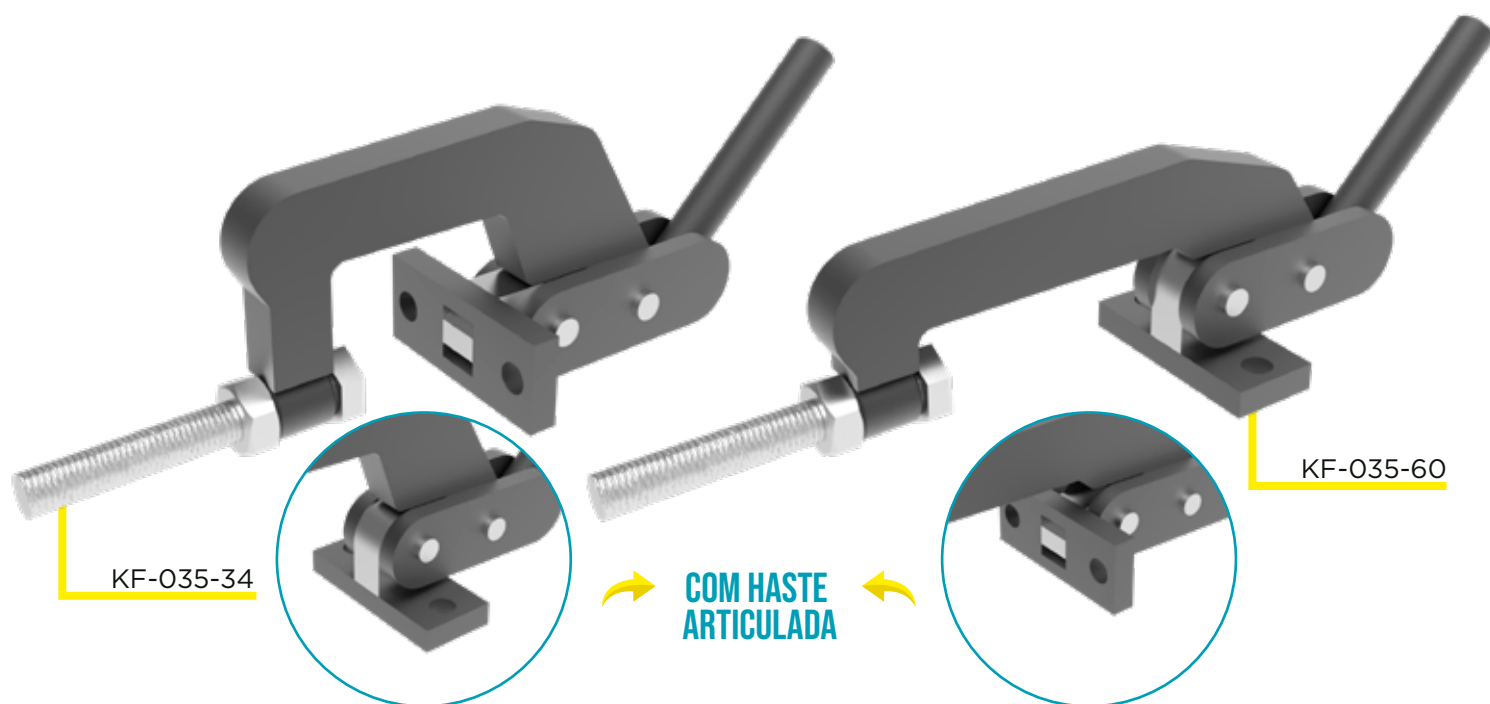
GRAMPOS SARGENTOS



KF-150

| REFERÊNCIA | A | B | C | D | E | H | L | M | PESO KG |
|------------|-----|------|----|----|-----|----|-----|----|---------|
| KFS-150 | 150 | 19 | 42 | 16 | 9,5 | 50 | 233 | 16 | 0,600 |
| KFS-300 | 320 | 25,4 | 81 | 19 | 9,5 | 85 | 472 | 22 | 1,900 |

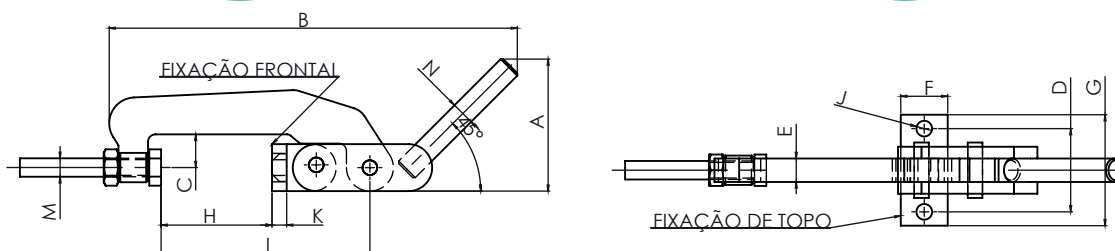
GRAMPOS COMPRESSORES



KF-035-34

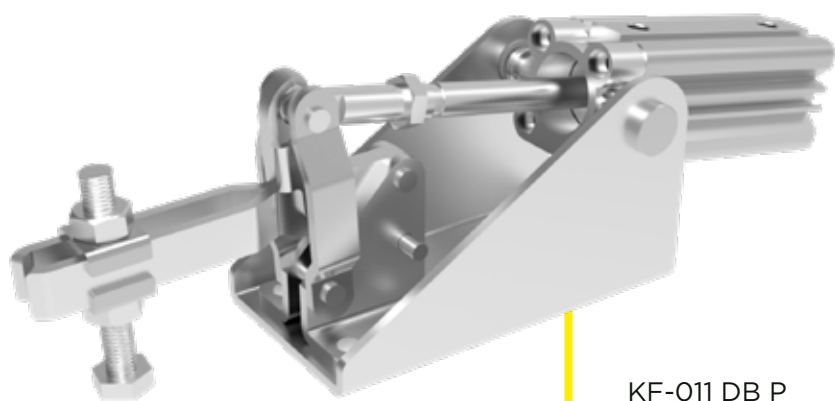
KF-035-60

COM HASTE ARTICULADA

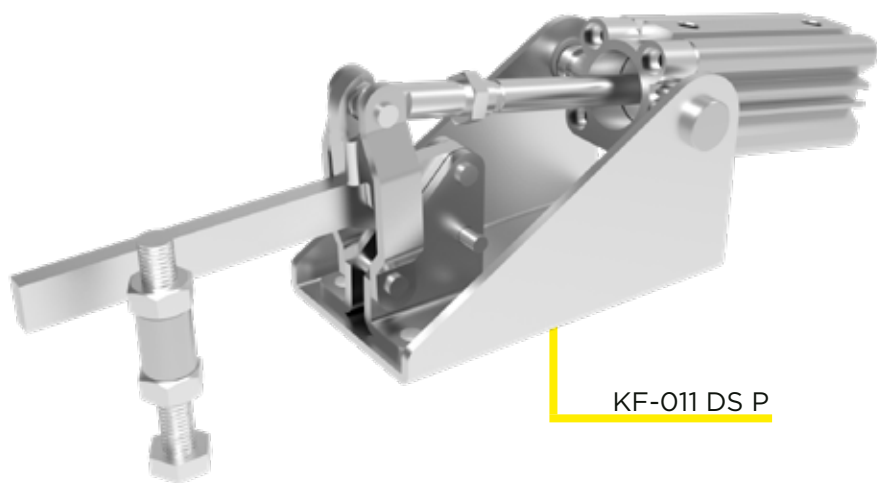
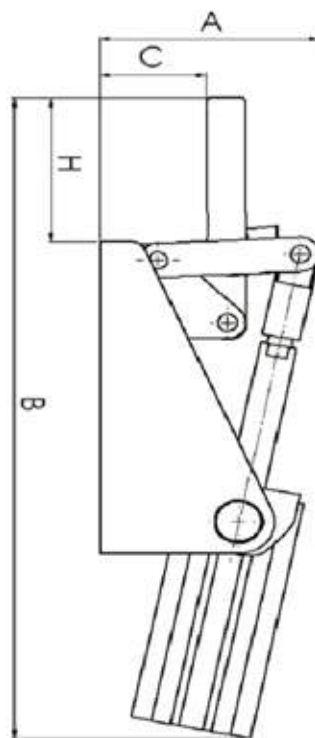


| REFERÊNCIA | FORÇA DE RETENÇÃO KGf | A | B | C | D | E | F | G | H | I | J | K | M | N | PESO KG |
|-------------|-----------------------|-----|-----|----|----|------|------|----|-----|-----|------|------|-----|------|---------|
| KF-035 34 | 1000 | 71 | 195 | 36 | 45 | 12,7 | 25,4 | 60 | 34 | 87 | 8,5 | 7,94 | M10 | 12,7 | 0,910 |
| KF-035 60 | 1000 | 71 | 221 | 18 | 45 | 12,7 | 25,4 | 60 | 60 | 113 | 8,5 | 7,94 | M10 | 12,7 | 0,890 |
| KF-035 3660 | 1000 | 71 | 221 | 36 | 45 | 12,7 | 25,4 | 60 | 60 | 113 | 8,5 | 7,94 | M10 | 12,7 | 0,955 |
| KF-035 100 | 2000 | 101 | 318 | 70 | 68 | 15,9 | 40 | 88 | 100 | 164 | 10,5 | 12,7 | M10 | 15,9 | 2,215 |

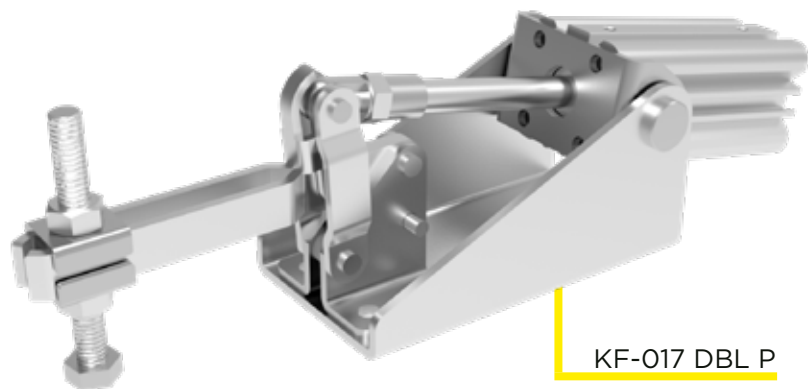
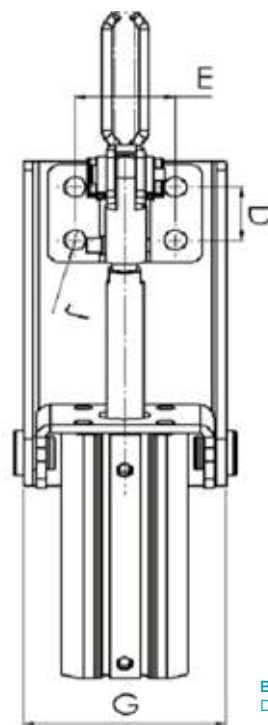
GRAMPOS PNEUMÁTICOS



KF-011 DB P



KF-011 DS P



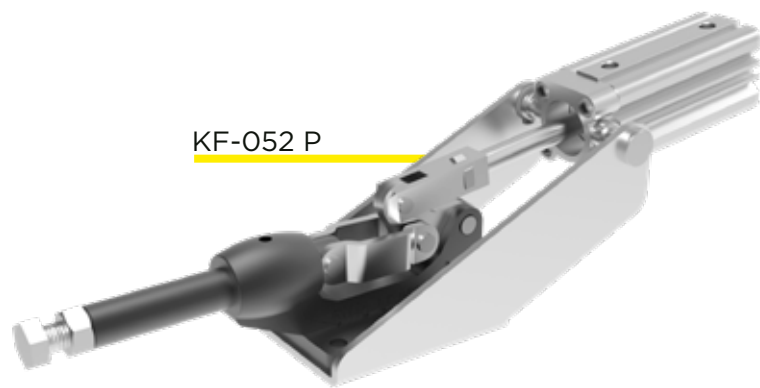
KF-017 DBL P

BASES
D - Dobrada

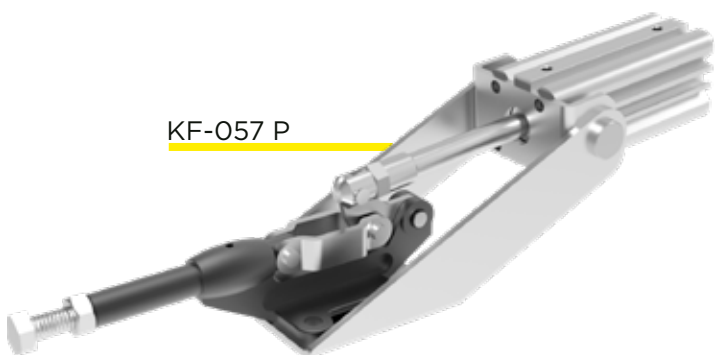
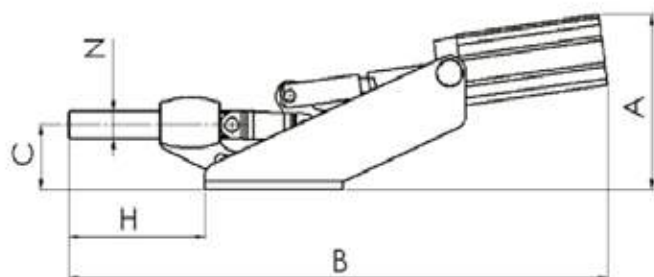
HASTES
B - Bifurcada
S - Sólida
L - Longa

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | G | H | J | ROSCA CIL | ÂNGULO DE ABERTURA | PESO KG |
|--------------|-----------------------|-----|-----|----|------|----|------|-----|-----|------------|--------------------|---------|
| KF-012 DB P | 90 | 53 | 235 | 26 | 12,7 | 27 | 50 | 42 | 5,6 | 1/8" NPT | 70 | 0,630 |
| KF-017 DB P | 170 | 72 | 238 | 35 | 19 | 32 | 64 | 53 | 7,0 | M5 | 100 | 1,510 |
| KF-017 DBL P | 150 | 72 | 268 | 35 | 19 | 32 | 64 | 83 | 7,0 | M5 | 100 | 1,530 |
| KF-017 DS P | 200 | 72 | 268 | 35 | 19 | 32 | 64 | 83 | 7,0 | M5 | 100 | 1,530 |
| KF-011 DB P | 280 | 97 | 328 | 47 | 32 | 44 | 79 | 86 | 8,5 | 1/8" NPT | 100 | 2,830 |
| KF-011 DBL P | 250 | 97 | 354 | 47 | 32 | 44 | 79 | 112 | 8,5 | 1/8" NPT | 100 | 2,860 |
| KF-011 DS P | 300 | 97 | 354 | 47 | 32 | 44 | 79 | 112 | 8,5 | 1/8" NPT | 100 | 2,850 |
| KF-111 DB P | 680 | 119 | 393 | 55 | 32 | 45 | 89,5 | 100 | 8,5 | 1/8" NPT | 100 | 4,700 |
| KF-111 DS P | 700 | 119 | 438 | 55 | 32 | 45 | 89,5 | 145 | 8,5 | 1/8" NPT | 100 | 4,700 |
| KF-111 DBL P | 650 | 119 | 393 | 55 | 32 | 45 | 89,5 | 145 | 8,5 | 1/8 in NPT | 100 | 3,55 |

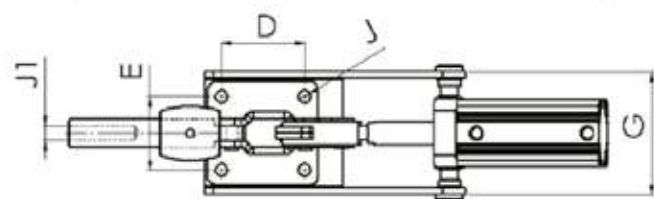
GRAMPOS PNEUMÁTICOS



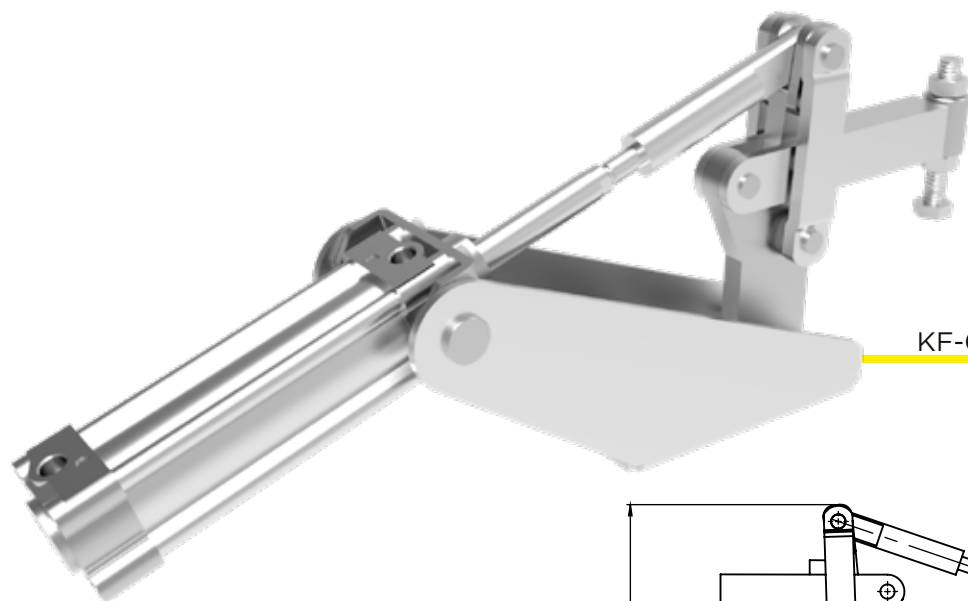
KF-052 P



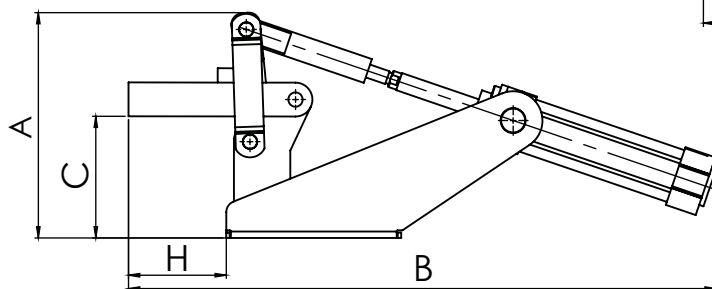
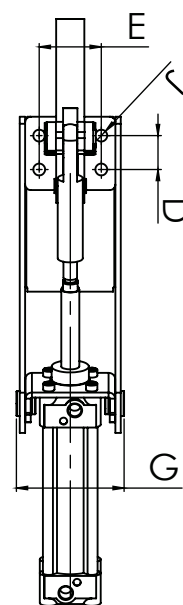
KF-057 P



| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | G | H | J | J1 | N | ROSCA CIL | PESO KG |
|------------|-----------------------|-----|-----|----|----|----|------|----|-----|----------|----|-----------|---------|
| KF-057 P | 230 | 80 | 284 | 25 | 35 | 40 | 65 | 68 | 7,0 | M8X1,25 | 12 | M5 | 1,500 |
| KF-052 P | 700 | 119 | 390 | 44 | 60 | 50 | 83,5 | 99 | 8,5 | M12X1,75 | 19 | 1/8" NPT | 3,700 |



KF-066 TS P



BASES
T - Base T

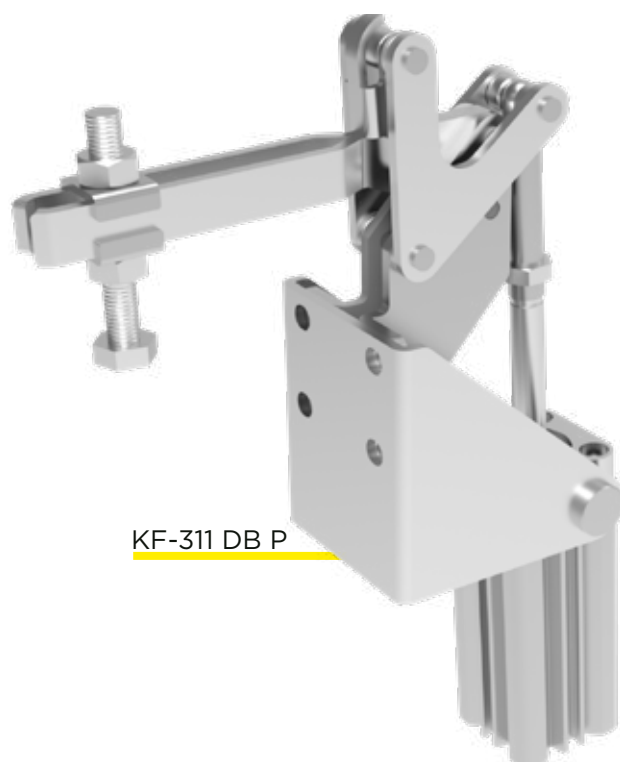
HASTES
S - Sólida

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | G | H | J | ROSCA CIL | ÂNGULO DE ABERTURA | PESO KG |
|-------------|-----------------------|-----|-----|-----|----|----|------|----|------|-----------|--------------------|---------|
| KF-066 TS P | 1400 | 200 | 521 | 108 | 30 | 55 | 95,5 | 87 | 10,5 | 1/8" NPT | 55 | 7,700 |

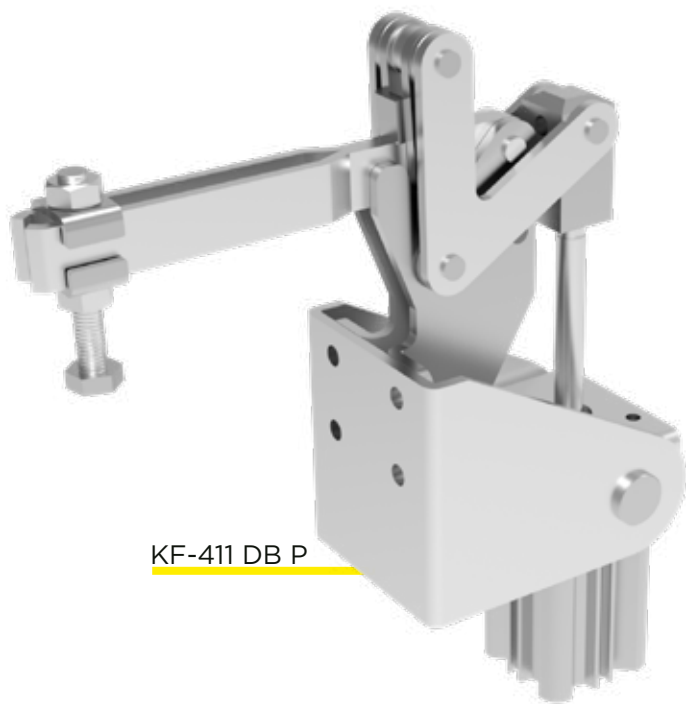
GRAMPOS PNEUMÁTICOS



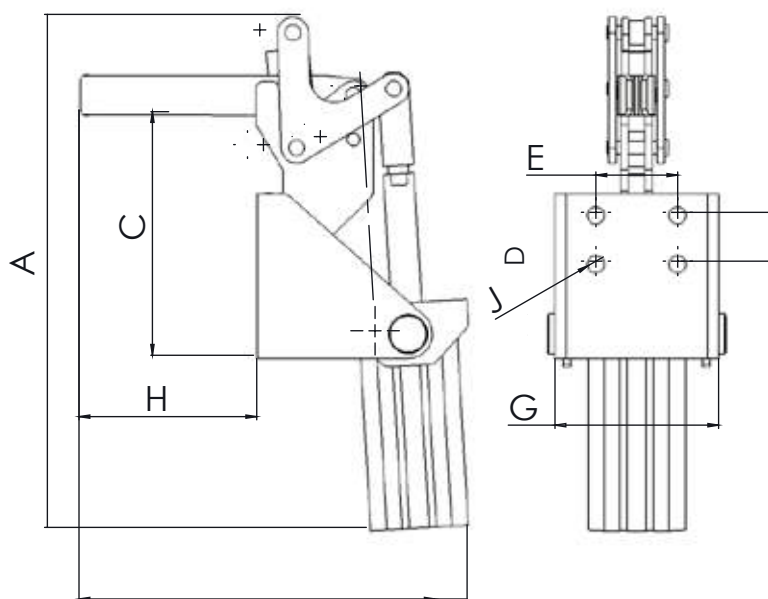
KF-019 DS P



KF-311 DB P



KF-411 DB P



BASES
D - Dobrada

HASTES
B - Bifurcada
S - Sólida

| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | G | H | J | ROSCA CIL | ÂNGULO DE ABERTURA | PESO KG |
|-------------|-----------------------|-----|-----|-----|----|------|----|-----|-----|-----------|--------------------|---------|
| KF-019 DB P | 250 | 210 | 159 | 97 | 20 | 33,5 | 67 | 73 | 7,0 | M5 | 100 | 1,600 |
| KF-019 DS P | 280 | 210 | 159 | 97 | 20 | 33,5 | 67 | 73 | 7,0 | M5 | 100 | 1,600 |
| KF-311 DB P | 250 | 282 | 216 | 130 | 32 | 44 | 75 | 102 | 8,5 | 1/8" NPT | 100 | 2,830 |
| KF-311 DS P | 300 | 282 | 216 | 130 | 32 | 44 | 75 | 102 | 8,5 | 1/8" NPT | 100 | 2,800 |
| KF-411 DB P | 650 | 305 | 260 | 156 | 32 | 45 | 90 | 128 | 8,5 | 1/8" NPT | 100 | 4,800 |
| KF-411 DS P | 700 | 305 | 260 | 156 | 32 | 45 | 90 | 128 | 8,5 | 1/8" NPT | 100 | 4,800 |

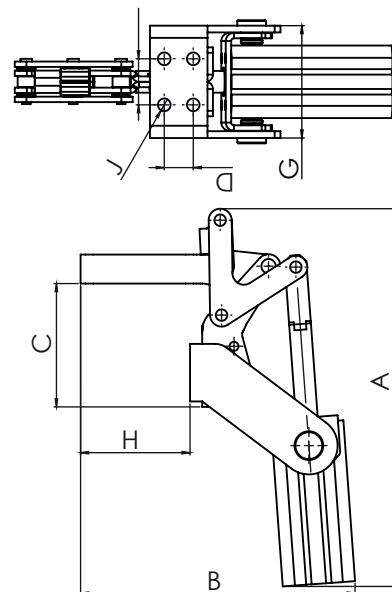
GRAMPOS PNEUMÁTICOS



KF-718 S P

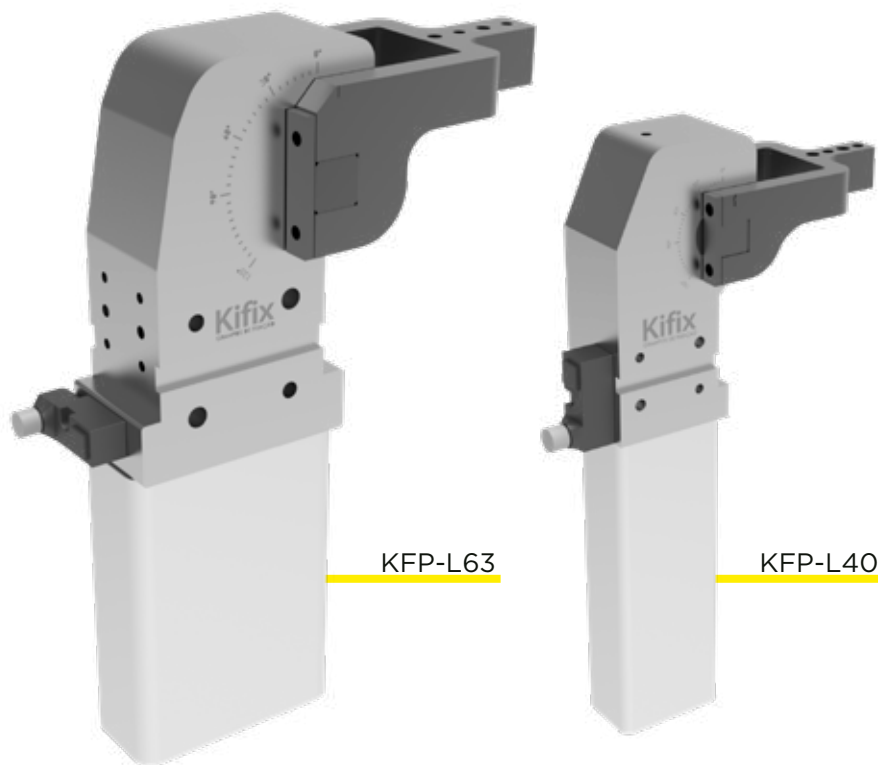
KF-718 B P

HASTES
B - Bifurcada
S - Sólida



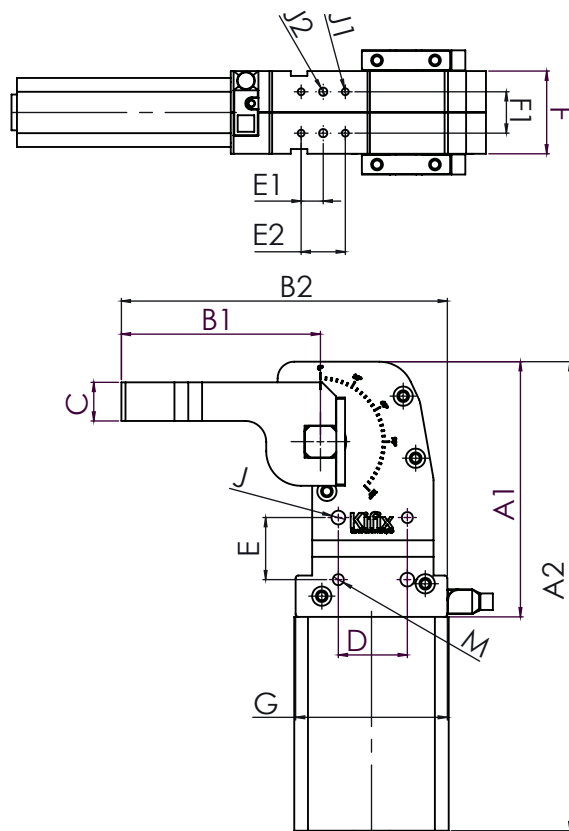
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | G | H | J | ROSCA CIL | PESO KG |
|------------|-----------------------|-----|-----|----|----|------|----|------|-----|-----------|---------|
| KF-718 B P | 200 | 203 | 152 | 68 | 16 | 25,4 | 62 | 60,4 | 7,0 | M5 | 1,500 |
| KF-718 S P | 200 | 203 | 169 | 68 | 16 | 25,4 | 62 | 78 | 7,0 | M5 | 1,500 |

GRAMPOS PNEUMÁTICOS PESADOS



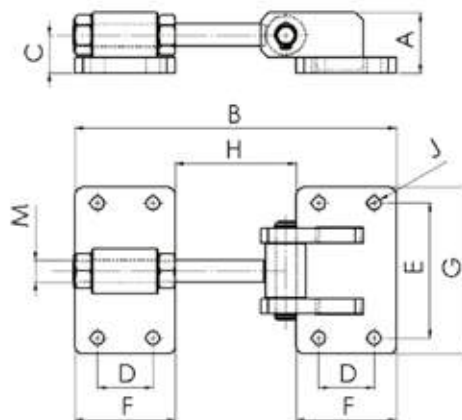
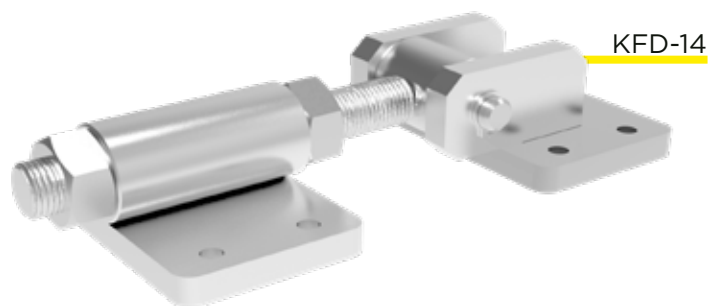
KFP-L63

KFP-L40



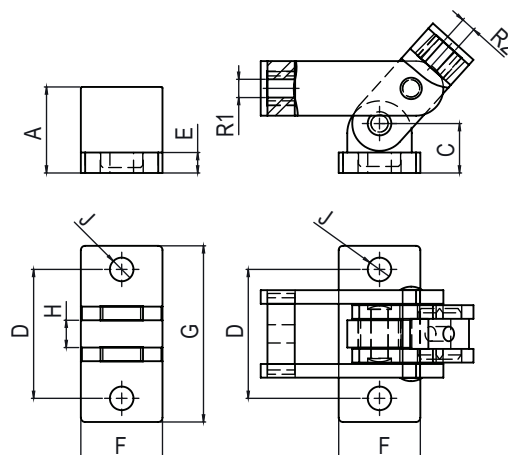
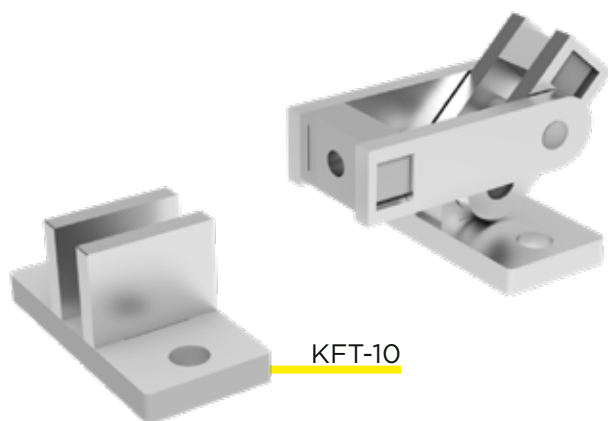
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | ABERTURA (REGULÁVEL) | A1 | A2 | B1 | B2 | C | D | D1 | E | E1 | E2 | F | F1 | G | J | J1 | J2 | M | PESO KG |
|------------|-----------------------|----------------------|-----|-----|-----|-----|----|----|----|----|----|----|----|----|-----|----|----|----|----|---------|
| KFP-L40 | 400 | 0° - 135° | 146 | 325 | 110 | 170 | 22 | 35 | 25 | 25 | | 20 | 48 | 24 | 65 | 6 | M6 | | M6 | 6,000 |
| KFP-L63 | 1.100 | 0° - 135° | 185 | 340 | 144 | 236 | 28 | 50 | 30 | 45 | 16 | 32 | 60 | 30 | 110 | 10 | M6 | 6 | M8 | 6,500 |

DOBRADIÇAS



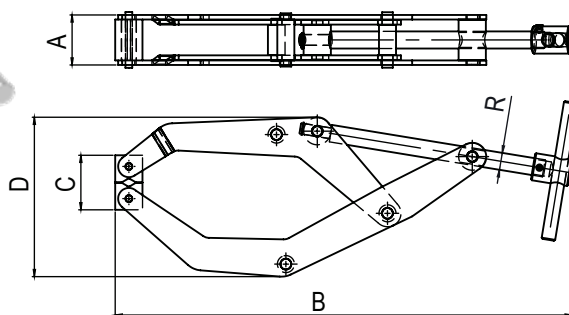
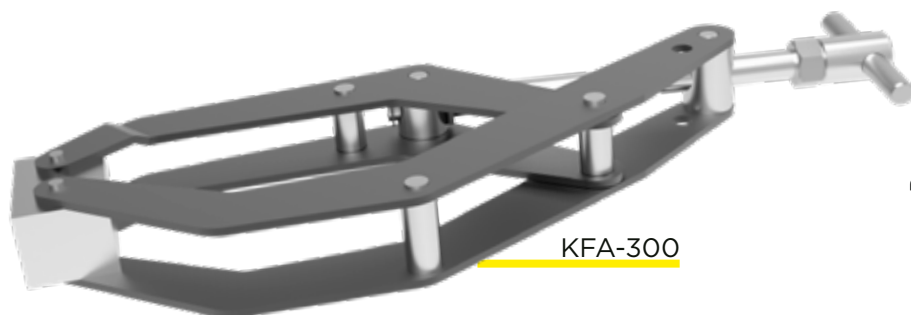
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | F | G | H | J | M | PESO KG |
|------------|-----------------------|------|-------|------|----|----|------|-----|------|-----|----------|---------|
| KFD-14 | 900 | 33 | 156 | 21 | 26 | 60 | 50 | 76 | 56 | 5,5 | M14X2,00 | 1,040 |
| KFD-19 | 1400 | 38,1 | 203,5 | 23,8 | 35 | 85 | 63,5 | 105 | 76,5 | 8,5 | M14X2,00 | 1,750 |

TRINCOS



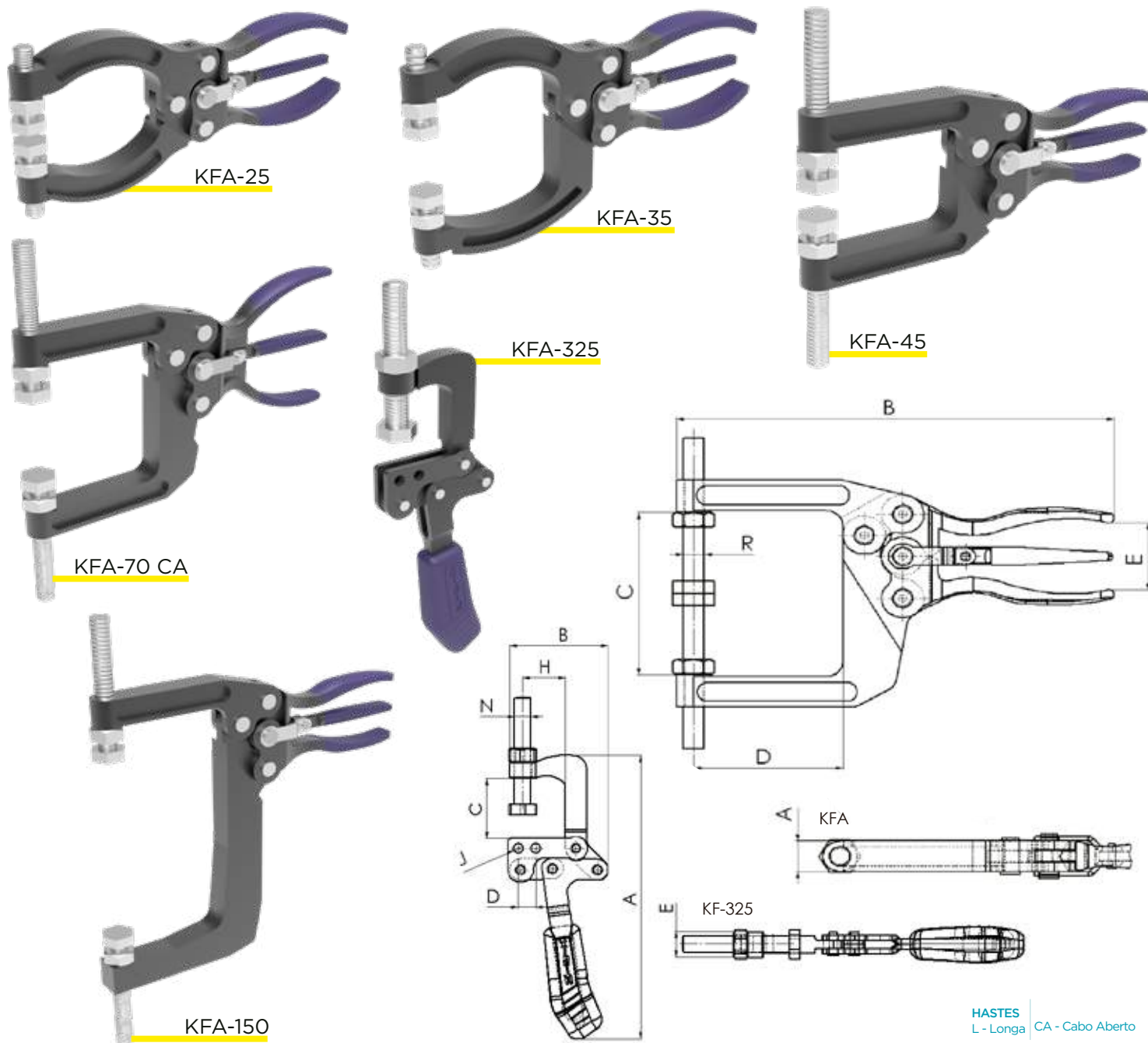
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | C | D | E | F | G | H | J | R1 | R2 | PESO KG |
|------------|-----------------------|----|----|----|-----|----|----|------|------|----------|----------|---------|
| KFT-10 | 900 | 40 | 23 | 60 | 9,5 | 38 | 82 | 12,7 | 11 | M10X1,50 | M8X1,25 | 1,040 |
| KFT-14 | 1400 | 40 | 25 | 70 | 9,5 | 38 | 90 | 16 | 12,5 | M14X2,00 | M14X2,00 | 1,370 |

ALICATES



| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C (FECHADO) | C (ABERTO) | D | ROSCA | PESO KG |
|------------|-----------------------|----|-----|-------------|------------|-----|----------|---------|
| KFA-300 | 150 | 47 | 432 | 60 | 300 | 148 | M16X2,00 | 2,750 |

ALICATES



| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | H | J | N | ÂNGULO DE ABERTURA | PESO KG |
|------------|-----------------------|-----|----|------|------|----|----|-------|----------|--------------------|---------|
| KF-325 | 900 | 212 | 73 | 45,3 | 12,7 | 19 | 32 | 6,800 | M12X1,75 | 93 | 0,575 |

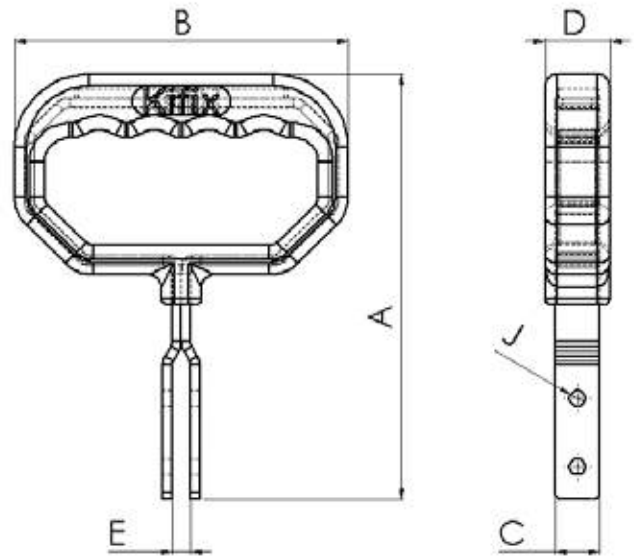
| REFERÊNCIA | FORÇA DE RETENÇÃO KGF | A | B | C | D | E | ROSCA | PESO KG |
|------------|-----------------------|----|-----|-----|-------|------|----------|---------|
| KFA-25 | 250 | 10 | 140 | 28 | 46,5 | 21,4 | M6X1,00 | 0,240 |
| KFA-35 | 250 | 10 | 140 | 45 | 46,5 | 21,4 | M6X1,00 | 0,250 |
| KFA-45 | 900 | 16 | 205 | 53 | 70 | 35,2 | M10X1,50 | 0,890 |
| KFA-45 CA | 900 | 16 | 205 | 53 | 70 | 80,2 | M10X1,50 | 1,010 |
| KFA-70 | 900 | 16 | 205 | 85 | 70 | 35,2 | M10X1,50 | 0,980 |
| KFA-70 CA | 900 | 16 | 205 | 85 | 70 | 80,2 | M10X1,50 | 1,100 |
| KFA-90 | 900 | 16 | 205 | 93 | 71,5 | 35,2 | M10X1,50 | 1,120 |
| KFA-90 CA | 900 | 16 | 205 | 93 | 71,5 | 80,2 | M10X1,50 | 1,240 |
| KFA-90 L | 250 | 16 | 305 | 93 | 171,5 | 35,2 | M10X1,50 | 1,490 |
| KFA-100 | 900 | 16 | 205 | 103 | 71,5 | 35,2 | M10X1,50 | 1,150 |
| KFA-100 CA | 900 | 16 | 205 | 103 | 71,5 | 80,2 | M10X1,50 | 1,270 |
| KFA-150 | 900 | 16 | 205 | 153 | 71,5 | 35,2 | M10X1,50 | 1,290 |
| KFA-150 CA | 900 | 16 | 205 | 153 | 71,5 | 85,2 | M10X1,50 | 1,410 |

ALÇA

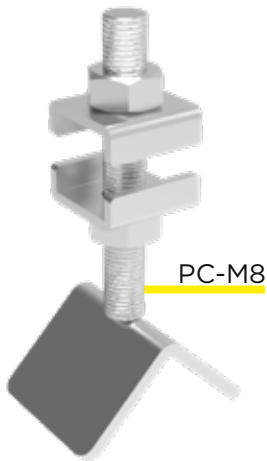


KF-AL

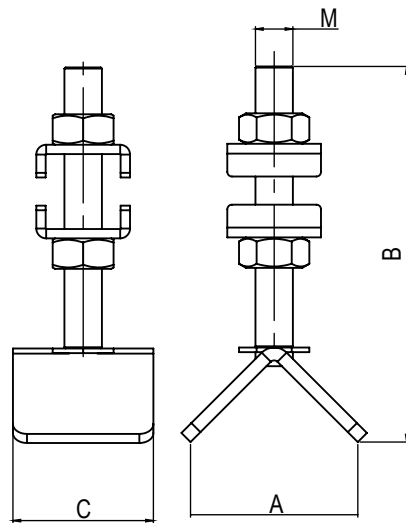
| REFERÊNCIA | A | B | C | D | E | J | PESO KG |
|------------|-----|-----|----|----|-----|-----|---------|
| KF-AL | 174 | 134 | 18 | 26 | 7,5 | 6,4 | 0,460 |



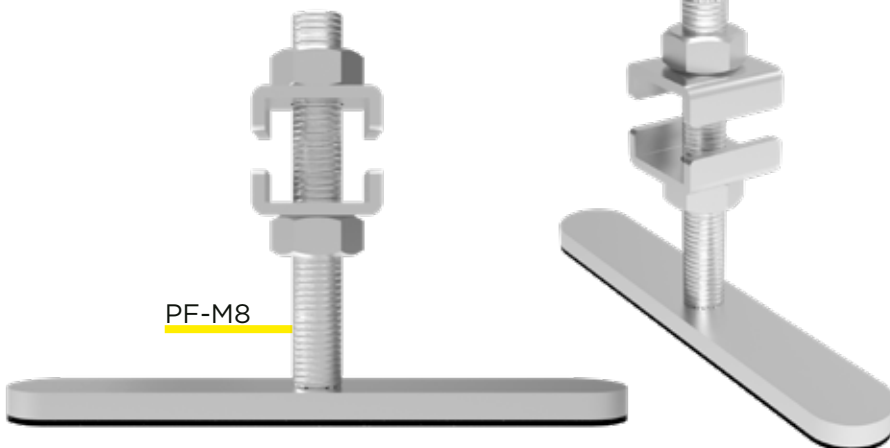
PONTEIRAS



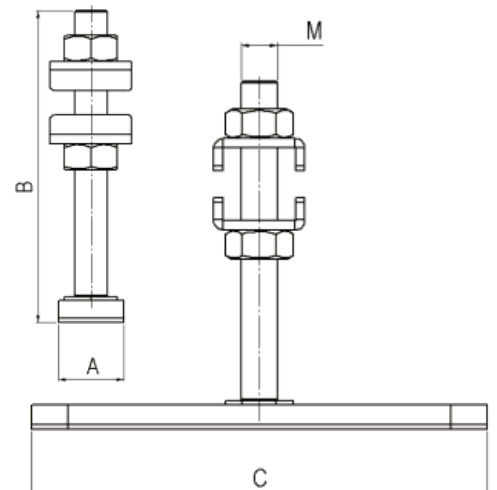
PC-M8



| REFERÊNCIA | A | B | C | M |
|--------------|----|-----|-----|-----|
| PC-M6 | 36 | 80 | 30 | M6 |
| PC-M8 | 36 | 100 | 30 | M8 |
| PC-M10 | 36 | 91 | 30 | M10 |
| PF-M6 35x40 | 16 | 35 | 40 | M6 |
| PF-M6 51x40 | 16 | 51 | 40 | M6 |
| PF-M6 51x100 | 16 | 51 | 100 | M6 |
| PF-M6 66x100 | 16 | 66 | 100 | M6 |
| PF-M8 | 16 | 77 | 100 | M8 |
| PF-M10 | 16 | 77 | 100 | M10 |



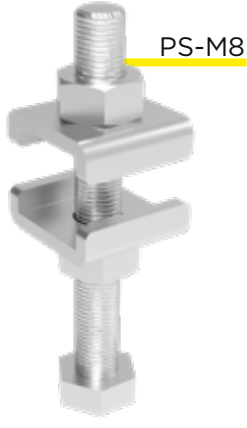
PF-M8



PONTEIRAS



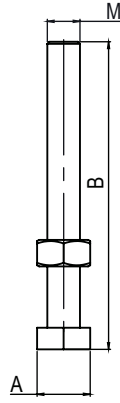
PSB-M8



PS-M8



PP-M8



| REFERÊNCIA | A | B | M |
|------------|----|----|-----|
| PP-M6 | 10 | 49 | M6 |
| PP-M8 | 13 | 45 | M8 |
| PP-M10 | 17 | 51 | M10 |
| PP-M12 | 19 | 47 | M12 |
| PP-M16 | 24 | 79 | M16 |
| PS-M6 | 10 | 64 | M6 |
| PS-M8 | 13 | 75 | M8 |
| PS-M10 | 17 | 77 | M10 |
| PSB-M6 | 10 | 64 | M6 |
| PSB-M8 | 13 | 75 | M8 |
| PSB-M10 | 17 | 77 | M10 |
| PSB-M12 | 19 | 87 | M12 |



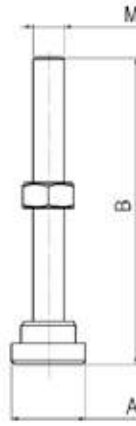
ARB-M8



ARP-M8



PA-M8



| REFERÊNCIA | A | B | M |
|------------|----|-----|-----|
| PA-M6 | 19 | 67 | M6 |
| PA-M8 | 19 | 80 | M8 |
| PA-M10 | 19 | 80 | M10 |
| PA-M12 | 32 | 95 | M12 |
| PA-M16 | 32 | 118 | M16 |
| ARP-M6 | 19 | 67 | M6 |
| ARP-M8 | 19 | 80 | M8 |
| ARP-M10 | 19 | 80 | M10 |
| ARB-M6 | 19 | 67 | M6 |
| ARB-M8 | 19 | 80 | M8 |
| ARB-M10 | 19 | 80 | M10 |
| ARB-M16 | 32 | 118 | M16 |



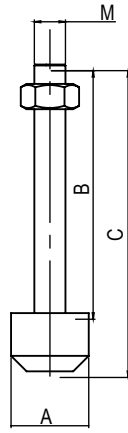
PB-M8



BRP-M8



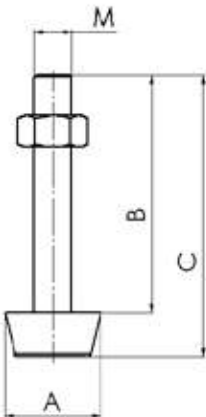
BRB-M8



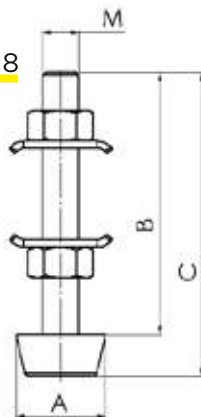
| REFERÊNCIA | A | B | C | M |
|------------|------|----|----|-----|
| PB-M6 | 15 | 57 | 69 | M6 |
| PB-M8 | 18,5 | 63 | 78 | M8 |
| PB-M10 | 23 | 63 | 82 | M10 |
| BRP-M6 | 15 | 57 | 69 | M6 |
| BRP-M8 | 18,5 | 63 | 78 | M8 |
| BRP-M10 | 23 | 63 | 82 | M10 |
| BRB-M6 | 15 | 57 | 69 | M6 |
| BRB-M8 | 18,5 | 63 | 78 | M8 |
| BRB-M10 | 23 | 63 | 82 | M10 |
| BAP-M6 | 16 | 24 | 31 | M6 |



BRP-M8



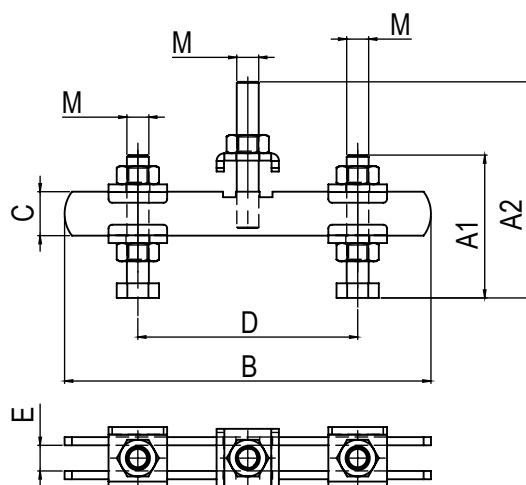
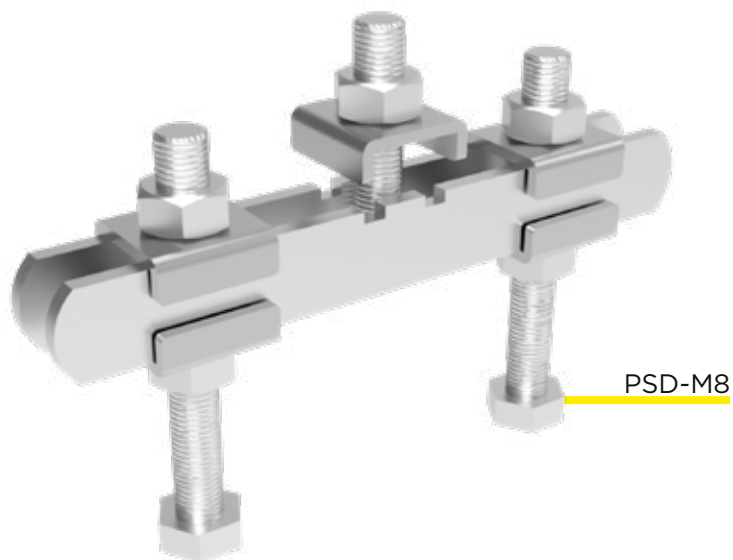
BRB-M8



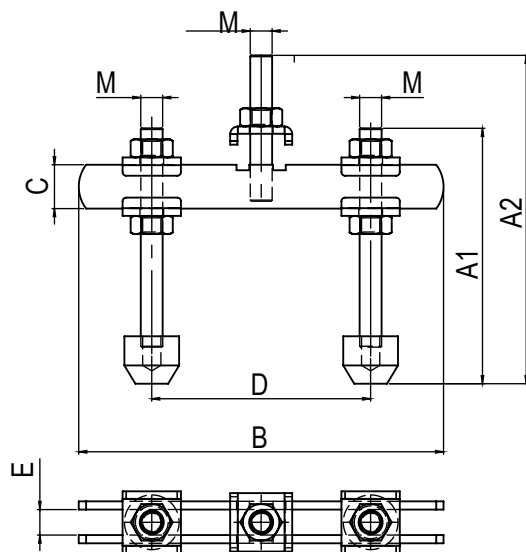
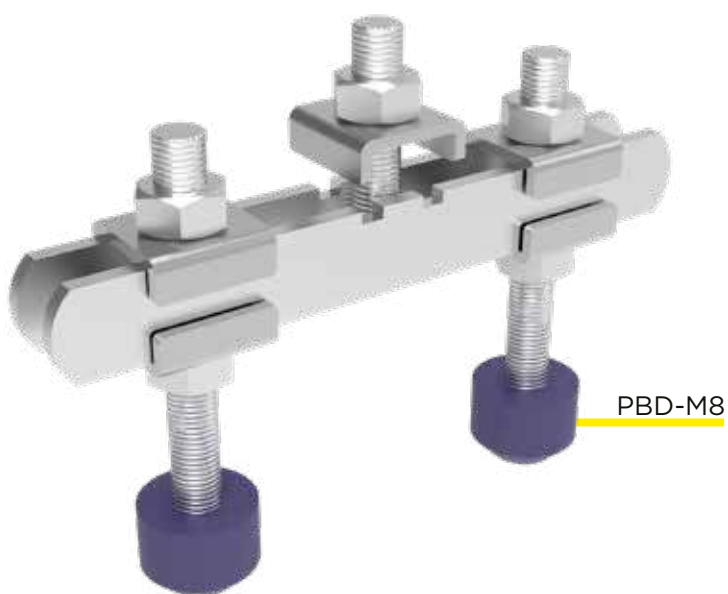
| REFERÊNCIA | A | B | C | M |
|------------|------|----|----|----|
| PBC-M4X20 | 11,2 | 19 | 24 | M4 |
| PBC-M4X30 | 11,2 | 29 | 34 | M4 |
| PBC-M5X25 | 12,7 | 25 | 30 | M5 |
| PBC-M5X30 | 12,7 | 30 | 35 | M5 |
| PBC-M5X35 | 12,7 | 35 | 40 | M5 |
| PBC-M6X30 | 15,8 | 29 | 36 | M6 |
| PBC-M6X40 | 15,8 | 39 | 46 | M6 |
| PBC-M6X45 | 15,8 | 44 | 51 | M6 |

| REFERÊNCIA | A | B | C | M |
|------------|------|----|----|----|
| BRPC-M5X25 | 12,7 | 25 | 30 | M5 |
| BRPC-M5X30 | 12,7 | 30 | 35 | M5 |
| BRPC-M5X35 | 12,7 | 35 | 40 | M5 |
| BRPC-M6X30 | 15,8 | 29 | 36 | M6 |
| BRPC-M6X40 | 15,8 | 39 | 46 | M6 |
| BRPC-M6X45 | 15,8 | 44 | 51 | M6 |

PONTEIRAS



| REFERÊNCIA | A1 | A2 | B | C | D MÍN | D MÁX | E | M |
|------------|----|----|-----|----|-------|-------|----|-----|
| PSD-M6 | 49 | 59 | 100 | 12 | 30 | 80 | 7 | M6 |
| PSD-M8 | 75 | 86 | 120 | 15 | 35 | 92 | 9 | M8 |
| PSD-M10 | 76 | 90 | 180 | 20 | 42 | 148 | 11 | M10 |



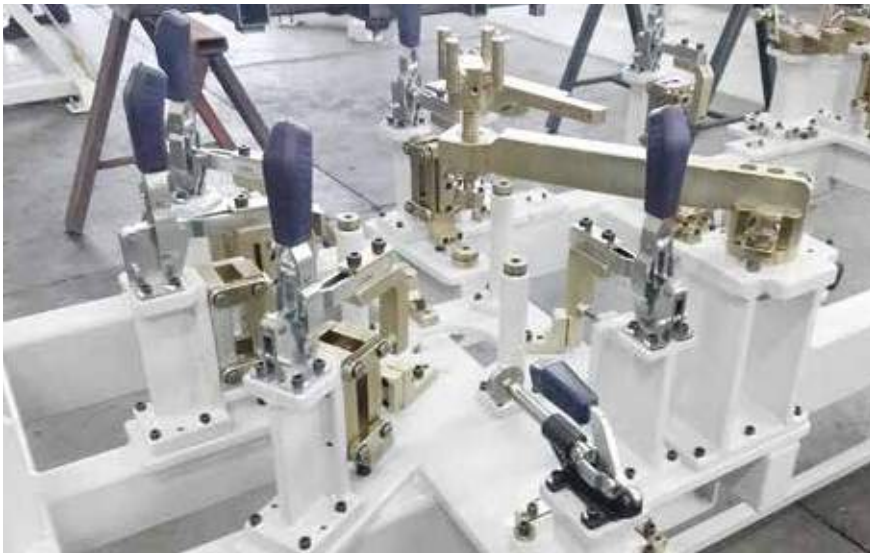
| REFERÊNCIA | A1 | A2 | B | C | D MÍN | D MÁX | E | M |
|------------|----|----|-----|----|-------|-------|----|-----|
| PBD-M6 | 69 | 89 | 100 | 12 | 30 | 80 | 7 | M6 |
| PBD-M8 | 78 | 89 | 120 | 15 | 35 | 92 | 9 | M8 |
| PBD-M10 | 82 | 95 | 180 | 20 | 42 | 148 | 11 | M10 |

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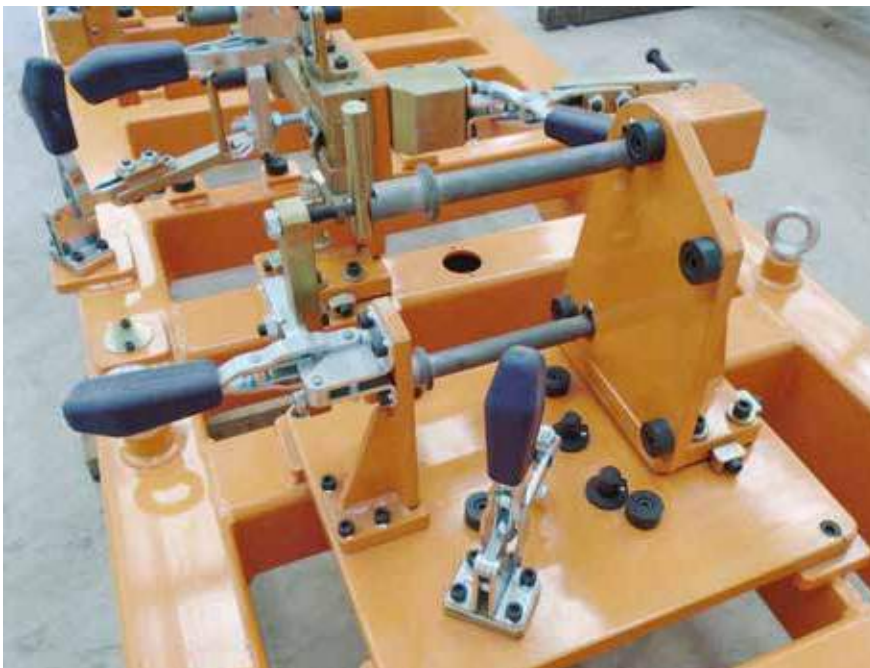
PP
PS
PSB
PB
BRP
BRB
PBC
BRPC
BAP
PA
ARP
ARB
PC
PF
PBD
PSD

LEGENDA

Ponteira Sextavada com Porca
Ponteira Sextavada com Anilha
Ponteira Sextavada com Bucha
Ponteira Borracha com Porca
Ponteira Borracha com Anilha
Ponteira Borracha com Bucha
Ponteira Borracha Cônica com Porca
Ponteira Borracha Cônica com Anilhas Redondas
Ponteira Borracha Articulada com Porca
Ponteira Articulada com Porca
Ponteira Articulada com Anilha
Ponteira Articulada com Bucha
Ponteira Cantoneira com Anilha
Ponteira Feltro com Anilha
Ponteira Dupla de Borracha
Ponteira Dupla Parafuso Sextavado

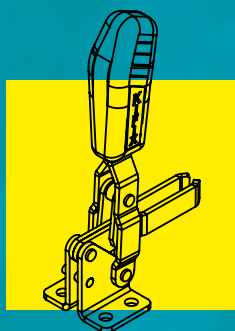


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Fone/Fax: 54 3028.4614/3028.4615 | kifix@kifix.com.br

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CEP 95032-710 - Caxias do Sul | RS