



MSP GN GM BH

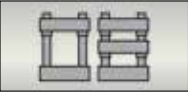


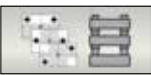


Märkische Stanz-Partner



[säulengestelle]

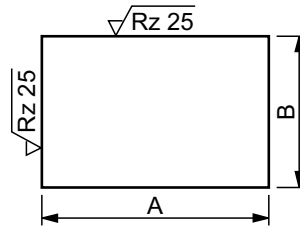
[diesets]

Stand / Revision Status 01.03.2023

|  | Säulengestelle aus Stahl | Steel die sets | Best.-Nr. Order no. | Seite Page |
|---|--|---|----------------------------|--------------------|
|  | <u>2 Platten, 2 Säulen, Typ A-C-D</u> | <u>2 plates, 2 leader pins, types A-C-D</u> | SG 2 . | SG. 5 - 8 |
|  | <u>2 Platten, 4 Säulen, Typ Q</u> | <u>2 plates, 4 leader pins, type Q</u> | SG 2 Q | SG. 13 - 16 |
|  | <u>3 Platten, 2 Säulen, Typ A-C-D</u> | <u>3 plates, 2 leader pins, types A-C-D</u> | SG 3 . | SG. 9 - 12 |
|  | <u>3 Platten, 4 Säulen, Typ Q</u> | <u>3 plates, 4 leader pins, type Q</u> | SG 3 Q | SG. 17 - 20 |
|  | <u>2 Platten, 2 Säulen, Typ A-C-D M-Line</u> | <u>2 plates, 2 leader pins, types A-C-D M-Line</u> | SG 2 . RM | SG. 26 - 29 |
|  | <u>2 Platten, 4 Säulen, Typ Q M-Line</u> | <u>2 plates, 4 leader pins, type Q M-Line</u> | SG 2 Q RM | SG. 34 - 37 |
|  | <u>3 Platten, 2 Säulen, Typ A-C-D M-Line</u> | <u>3 plates, 2 leader pins, types A-C-D M-Line</u> | SG 3 . RM | SG. 30 - 33 |
|  | <u>3 Platten, 4 Säulen, Typ Q M-Line</u> | <u>3 plates, 4 leader pins, type Q M-Line</u> | SG 3 Q RM | SG. 38 - 41 |
|  | Großstahlplatten | XXL - Steel plates | Best.-Nr. Order no. | Seite Page |
|  | <u>Großstahlplatten und Stahl-Schweiß-Konstruktionen mit Sonderbearbeitung</u> | <u>XXL - Steel plates and welded units with additional work / secondary operation</u> | | SG. 43 - 46 |

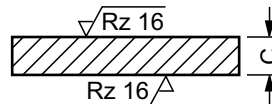
Mat.: C45

Toleranz Außenmaße /
Tolerance of length and width



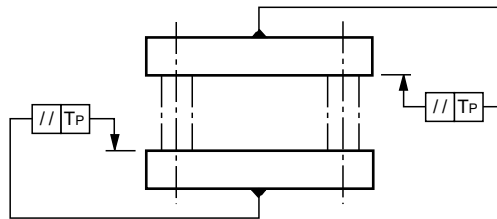
A x B +0,06
-0,06

Toleranz Plattenstärke /
Tolerance of thickness



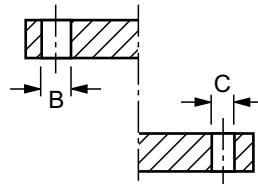
C ± 2

Parallelität der Flächenpaare /
Parallelism of two surfaces



TP = 0,012 / 100 mm

Bohrungstoleranzen /
Hole tolerances



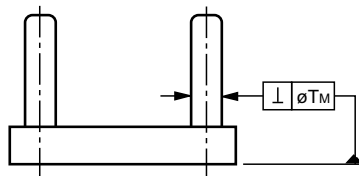
B = Aufnahmebohrung Buchse/ Mounting hole for bushing:

FS 468 = K7
FS 4 .. = H6
FS 6 .. = H6
FS 7 .. = H6

C = Aufnahmebohrung Säule/ Mounting hole for leader pin:

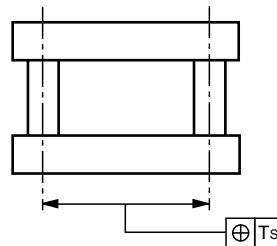
FS 420 = R7
FS 419 = JS6
FS 400/403 = H6

Winkelgenauigkeit der Führungssäulen /
Angular accuracy of leader pins



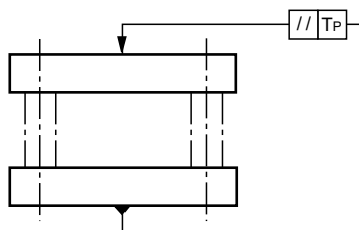
TM = 0,012 / 100 mm

Toleranz Systemabstände /
Tolerance of dimensions between leader-
pin (and bushing) - holes



Ts = ± 0,010

Planparallelität im
zusammengebauten Zustand /
Parallelism after mounting



TP = 0,015 / 100 mm

Säulen-Buchsen-Kombination für 2-Plattengestelle

Combination of leader-pin and -bushing in 2-plate-die-sets



SÄULENGESTELLE / DIE SETS

Bestellbeispiel / Order-example

| 2 C | 643 | P | 41 | Z |
|-------------------------------|-------------------------------|---------------------------------|-------------------------------|--|
| Gestelltyp Type of die set | Kataloggröße Catalog sizes | Säulentyp Type of leader pin | Buchsentyp Type of bushing | Position der Haltestücke Position of holding clamps |

Gestelltyp / Type of die set

Position der Haltestücke / Position of holding clamps

Buchsentyp / Type of bushing

**Sinterbuchse
Leader pin bushing, sintered**

| | | |
|--------|--------|--------|
| | | |
| FS 741 | FS 751 | FS 755 |
| 46 | 47 | 48 |

**Stahlbuchse mit Bronzeplattierung
Leader pin bushing, bronze plated**

| | | |
|--------|--------|--------|
| | | |
| FS 641 | FS 651 | FS 655 |
| 41 | 42 | 43 |

**Stahlbuchse mit Ms-Käfig
Leader pin bushing with ball cage**

| | | |
|-----------------|-----------------|-----------------|
| | | |
| FS 453 + FS 425 | FS 457 + FS 425 | FS 458 + FS 425 |
| 51 | 52 | 53 |

Säulentyp / Type of leader pin

| | |
|-----------------------------|--|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin with collar |
| | |
| FS 420 | FS 419 |
| P | R |



Bestellbeispiel / Order-example

| | | | | |
|-------------------------------|-------------------------------|---------------------------------|-------------------------------|--|
| 3 C | 643 | P | 71 | Z |
| Gestelltyp Type of die set | Kataloggröße Catalog sizes | Säulentyp Type of leader pin | Buchsentyp Type of bushing | Position der Haltestücke Position of holding clamps |

Gestelltyp / Type of die set

Buchsentyp / Type of bushing

| Sinterbuchse Leader pin bushing, sintered | |
|--|--|
| C1 = FS 741 C3 = FS 731 88 | C1 = FS 732 C3 = FS 731 87 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1 = FS 641 C3 = FS 631 71 | C1 = FS 632 C3 = FS 631 72 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | |
| C1 = FS 458 + FS 425 C3 = FS 457 + FS 425 91 | C1 = FS 453 + FS 425 C3 = FS 457 + FS 425 92 |

Säulentyp / Type of leader pin

| | |
|-----------------------------|--|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin with collar |
| FS 420 | FS 419 |
| P | R |

Position der Haltestücke / Position of holding clamps

| | |
|-------------------|-------------------|
| Pos. Z | Pos. X |
|-------------------|-------------------|



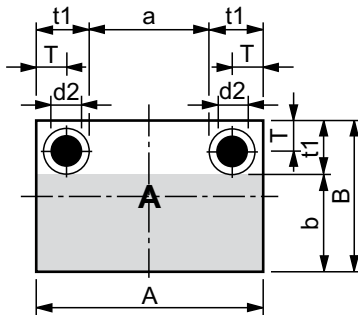
| Position | Plattenmaße Plate length and width | Plattenstärke Plate thickness | | | Säulentyp in C1 oder C2* Type of leader pin in C1 or C2* | | Buchsentyp in C1 oder C2** Type of bushing in C1 or C2** | | Buchsentyp in C3 Type of bushing in C3 | | Haltestückposition Position of holding clamps |
|----------|---------------------------------------|----------------------------------|----|----|---|-------------|---|------------|---|------------|--|
| Position | A x B | C1 | C2 | C3 | FS ... | d1 x l | FS ... | d x l | FS ... | d x l | |
| Q | 610 x 494 | 78 | 48 | 38 | 420 | 40/42 x 250 | 632 | 40/42 x 67 | 631 | 40/42 x 51 | X |

* = Säulentyp in C1 oder C2 bitte angeben. / Please fill in type of leader pin in C1 or C2.

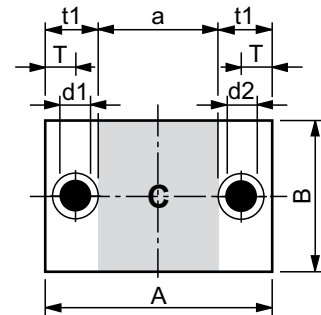
** = Buchsentyp in C1 oder C2 bitte angeben. / Please fill in type of bushing in C1 or C2.

Arbeitsflächen / Working areas

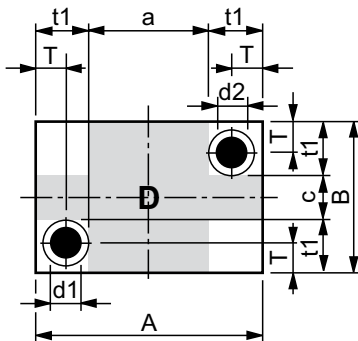
$b = B - t_1$



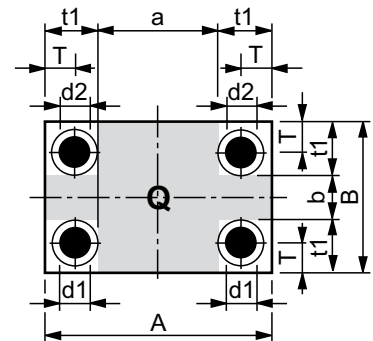
$a = A - (2 \times t_1)$



$a = A - (2 \times t_1)$
 $c = B - (2 \times t_1)$

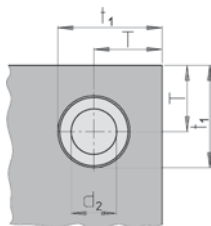


$a = A - (2 \times t_1)$
 $b = B - (2 \times t_1)$



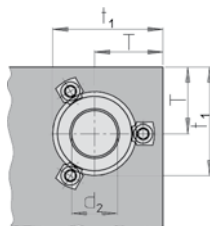
Zylindrische Führungsbuchsen

Leader pin bushings, cylindrical



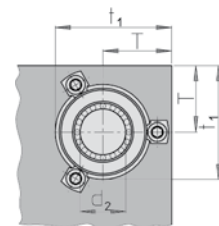
Führungsbuchsen mit Bund

Leader pin bushings, with collar



Führungsbuchsen mit Bund für Kugelführung

Leader pin bushings, with collar for ball-bearings



| d_1/d_2 | T | t_1 | d_1/d_2 | T | t_1 | d_1/d_2 | T | t_1 |
|-----------|----|-------|-----------|----|-------|-----------|----|-------|
| 18/19 | 25 | 40 | 18/19 | 32 | 49 | 18/19 | 35 | 55 |
| 24/25 | 29 | 46 | 24/25 | 37 | 59 | 24/25 | 40 | 65 |
| 30/32 | 37 | 60 | 30/32 | 44 | 71 | 30/32 | 48 | 79 |
| 40/42 | 45 | 74 | 40/42 | 49 | 81 | 40/42 | 53 | 89 |
| 50/52 | 52 | 87 | 50/52 | 57 | 97 | 50/52 | 61 | 105 |
| 63 | - | - | 63 | 64 | 117 | 63 | - | - |
| 80 | - | - | 80 | 73 | 135 | 80 | - | - |

| Buchsentyp / Type of bushing | | |
|--|-----------------|-----------------|
| Sinterbuchse Leader pin bushing, sintered | | |
| | | |
| FS 741 | FS 751 | FS 755 |
| 46 | 47 | 48 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 641 | FS 651 | FS 655 |
| 41 | 42 | 43 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 453 + FS 425 | FS 457 + FS 425 | FS 458 + FS 425 |
| 51 | 52 | 53 |

| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 420 | FS 419 |
| P | R |

| Gestelltyp / Type of die set | |
|------------------------------|--|
| | |
| | |
| | |

| Position der Haltestücke / Position of holding clamps | |
|---|--------|
| | |
| Pos. Z | Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------|--|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 46 41 | | | 47 42 | | | 48 43 | | | 51 | | | 52 | | | 53 | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | | c X A | a X B | b X A | c X A | a X B | b X A | c X A | | | |
| 601 | | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 7,0 | | |
| 602 | 125 | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 27 | 76 | 27 | | | | | | | | 70 | | | 7,7 | | |
| | X | 28 | 28 | - | | | | | | | | X | X | X | | | | | | | | X | | | | | |
| | 125 | 38 | 28 | - | | 150 | 110 | 100 | | | | 125 | 125 | 125 | | | | | | | | 125 | | | 8,9 | | |
| 603 | | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 8,8 | | |
| 604 | 160 | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 62 | 76 | 27 | | | | | | | | 50 | 70 | | 9,6 | | |
| | X | 28 | 28 | - | | | | | | | | X | X | X | | | | | | | | X | X | | | | |
| | 125 | 38 | 28 | - | | 150 | 110 | 100 | | | | 125 | 160 | 160 | | | | | | | | 125 | 160 | | 11,2 | | |
| 605 | | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 11,0 | | |
| 606 | 160 | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 62 | 111 | 62 | | | | | | | | 50 | 105 | 50 | 12,0 | | |
| | X | 28 | 28 | - | | | | | | | | X | X | X | | | | | | | | X | X | X | | | |
| | 160 | 38 | 28 | - | | 150 | 110 | 100 | | | | 160 | 160 | 160 | | | | | | | | 160 | 160 | 160 | 14,0 | | |
| 607 | | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 10,8 | | |
| 608 | 200 | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 102 | 76 | 27 | | | | | | | | 90 | 70 | | 11,8 | | |
| | X | 28 | 28 | - | | | | | | | | X | X | X | | | | | | | | X | X | | | | |
| | 125 | 38 | 28 | - | | 150 | 110 | 100 | | | | 125 | 200 | 200 | | | | | | | | 125 | 200 | | 13,7 | | |
| 609 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 16,4 | | |
| 610 | 200 | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 82 | 101 | 42 | | | | | | | | 70 | 95 | 30 | 17,6 | | |
| | X | 33 | 33 | - | | | | | | | | X | X | X | | | | | | | | X | X | X | | | |
| | 160 | 48 | 38 | - | | 180 | 130 | 120 | | | | 160 | 200 | 200 | | | | | | | | 160 | 200 | 200 | 22,6 | | |
| 611 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 20,2 | | |
| 612 | 200 | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 82 | 141 | 82 | | | | | | | | 70 | 135 | 70 | 21,8 | | |
| | X | 33 | 33 | - | | | | | | | | X | X | X | | | | | | | | X | X | X | | | |
| | 200 | 48 | 38 | - | | 180 | 130 | 120 | | | | 200 | 200 | 200 | | | | | | | | 200 | 200 | 200 | 28,0 | | |
| 613 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 16,0 | | |
| 614 | 250 | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 132 | 66 | | | | | | | | | 120 | 60 | | 17,3 | | |
| | X | 33 | 33 | - | | | | | | | | X | X | | | | | | | | | X | X | | | | |
| | 125 | 48 | 38 | - | | 180 | 130 | 120 | | | | 125 | 250 | 250 | | | | | | | | 125 | 250 | | 22,1 | | |
| 615 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 20,2 | | |
| 616 | 250 | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 132 | 101 | 42 | | | | | | | | 120 | 95 | 30 | 21,8 | | |
| | X | 33 | 33 | - | | | | | | | | X | X | X | | | | | | | | X | X | X | | | |
| | 200 | 48 | 38 | - | | 180 | 130 | 120 | | | | 200 | 250 | 250 | | | | | | | | 200 | 250 | 250 | 28,0 | | |
| 617 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 16,0 | | |
| 618 | 250 | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 132 | 66 | | | | | | | | | 120 | 60 | | 17,3 | | |
| | X | 33 | 33 | - | | | | | | | | X | X | | | | | | | | | X | X | | | | |
| | 125 | 48 | 38 | - | | 180 | 130 | 120 | | | | 125 | 250 | 250 | | | | | | | | 125 | 250 | | 22,1 | | |
| 619 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 20,2 | | |
| 620 | 250 | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 132 | 101 | 42 | | | | | | | | 120 | 95 | 30 | 21,8 | | |
| | X | 33 | 33 | - | | | | | | | | X | X | X | | | | | | | | X | X | X | | | |
| | 160 | 48 | 38 | - | | 180 | 130 | 120 | | | | 160 | 250 | 250 | | | | | | | | 160 | 250 | 250 | 28,0 | | |
| 621 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 25,0 | | |
| 622 | 250 | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 132 | 141 | 82 | | | | | | | | 120 | 135 | 70 | 27,0 | | |
| | X | 33 | 33 | - | | | | | | | | X | X | X | | | | | | | | X | X | X | | | |
| | 200 | 48 | 38 | - | | 180 | 130 | 120 | | | | 200 | 250 | 250 | | | | | | | | 200 | 250 | 250 | 34,8 | | |
| 623 | | 38 | 33 | - | | 170 | 130 | - | | | | | | | | | | | | | | | | | 36,4 | | |
| 624 | 250 | 38 | 33 | - | 30/32 | 170 | 130 | - | | | | 108 | 179 | 108 | | | | | | | | 92 | 171 | 92 | 38,8 | | |
| | X | 38 | 33 | - | | | | | | | | X | X | X | | | | | | | | X | X | X | | | |
| | 250 | 48 | 38 | - | | 180 | 130 | 120 | | | | 250 | 250 | 250 | | | | | | | | 250 | 250 | 250 | 43,7 | | |
| 625 | | 38 | 33 | - | | 170 | 130 | - | | | | | | | | | | | | | | | | | 38,8 | | |
| 626 | 250 | 48 | 38 | - | | 180 | 130 | 120 | | | | | | | | | | | | | | | | | 43,7 | | |
| | X | 48 | 38 | - | | | | | | | | | | | | | | | | | | | | | | | |
| 627 | | 38 | 33 | - | | 160 | 120 | - | | | | | | | | | | | | | | | | | 36,4 | | |
| 628 | 250 | 38 | 33 | - | 30/32 | 170 | 130 | - | | | | 108 | 179 | 108 | | | | | | | | 92 | 171 | 92 | 38,8 | | |
| | X | 38 | 33 | - | | | | | | | | X | X | X | | | | | | | | X | X | X | | | |
| | 250 | 48 | 38 | - | | 180 | 130 | 120 | | | | 250 | 250 | 250 | | | | | | | | 250 | 250 | 250 | 43,7 | | |
| 629 | | 38 | 33 | - | | 160 | 120 | - | | | | | | | | | | | | | | | | | 36,4 | | |
| 630 | 250 | 38 | 33 | - | 30/32 | 170 | 130 | - | | | | 108 | 179 | 108 | | | | | | | | 92 | 171 | 92 | 38,8 | | |
| | X | 38 | 33 | - | | | | | | | | X | X | X | | | | | | | | X | X | X | | | |
| | 250 | 48 | 38 | - | | 180 | 130 | 120 | | | | 250 | 250 | 250 | | | | | | | | 250 | 250 | 250 | 43,7 | | |

| Buchsentyp / Type of bushing | | |
|--|-----------------|-----------------|
| Sinterbuchse Leader pin bushing, sintered | | |
| | | |
| FS 741 | FS 751 | FS 755 |
| 46 | 47 | 48 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 641 | FS 651 | FS 655 |
| 41 | 42 | 43 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 453 + FS 425 | FS 457 + FS 425 | FS 458 + FS 425 |
| 51 | 52 | 53 |

| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 420 | FS 419 |
| P | R |

| Gestelltyp / Type of die set | |
|------------------------------|--|
| | |
| | |
| | |

| Position der Haltestücke / Position of holding clamps | |
|---|--------|
| | |
| Pos. Z | Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | | | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-------------------------------|-----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|-------------|-------------|--|--|----|------|-------|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 46 41 | | | 47 42 | | | 48 43 | | | 51 | | | 52 | | | 53 | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | | b X A | c X A | a X B | b X A | c X A | | | | | | |
| 631 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 24,0 | | |
| 632 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | | | | | | | | | | | | | | | 25,9 | |
| | 160 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 633 | | 48 | 38 | - | | 180 | 130 | 120 | | | | | | | | | | | | | | | | | | 33,4 | |
| 634 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | | 29,8 | |
| 635 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | | | | | | | | | | | | | | | 32,1 | |
| | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 636 | | 48 | 38 | - | | 180 | 130 | 120 | | | | | | | | | | | | | | | | | | 41,5 | |
| 637 | | 38 | 33 | - | | 160 | 120 | - | | | | | | | | | | | | | | | | | | 43,3 | |
| 638 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 38 | - | 30/32 | 170 | 130 | - | | | | | | | | | | | | | | | | | | 46,3 | |
| | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 639 | | 48 | 38 | - | | 180 | 130 | 120 | | | | | | | | | | | | | | | | | | 52,5 | |
| 640 | | 38 | 33 | - | | 160 | 120 | - | | | | | | | | | | | | | | | | | | 52,0 | |
| 641 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 38 | - | 30/32 | 170 | 130 | - | | | | | | | | | | | | | | | | | | 55,5 | |
| | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 642 | | 48 | 38 | - | | 180 | 130 | 120 | | | | | | | | | | | | | | | | | | 62,5 | |
| 643 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | | 34,6 | |
| 644 | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | | | | | | | | | | | | | | | 37,3 | |
| | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 645 | | 48 | 38 | - | | 180 | 130 | 120 | | | | | | | | | | | | | | | | | | 48,3 | |
| 646 | | 38 | 33 | - | | 160 | 120 | - | | | | | | | | | | | | | | | | | | 50,5 | |
| 647 | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 38 | - | 30/32 | 170 | 130 | - | | | | | | | | | | | | | | | | | | 54,0 | |
| | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 648 | | 48 | 38 | - | | 180 | 130 | 120 | | | | | | | | | | | | | | | | | | 61,0 | |
| 649 | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | | | | | | | 74,0 | |
| 650 | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | | | | | | | | | | | | | | | 82,5 | |
| | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 651 | | 58 | 48 | - | | 210 | 150 | 140 | | | | | | | | | | | | | | | | | | 90,5 | |
| 652 | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | | | | | | | 86,0 | |
| 653 | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | | | | | | | | | | | | | | | 95,5 | |
| | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 654 | | 58 | 48 | - | | 210 | 150 | 140 | | | | | | | | | | | | | | | | | | 105,0 | |
| 655 | | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | | 39,4 | |
| 656 | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | | | | | | | | | | | | | | | 42,5 | |
| | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 657 | | 48 | 38 | - | | 180 | 130 | 120 | | | | | | | | | | | | | | | | | | 55,0 | |
| 658 | | 38 | 33 | - | | 160 | 120 | - | | | | | | | | | | | | | | | | | | 57,5 | |
| 659 | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 38 | - | 30/32 | 170 | 130 | - | | | | | | | | | | | | | | | | | | 61,5 | |
| | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 660 | | 48 | 38 | - | | 180 | 130 | 120 | | | | | | | | | | | | | | | | | | 69,0 | |

| Buchsentyp / Type of bushing | | |
|--|-----------------|-----------------|
| Sinterbuchse Leader pin bushing, sintered | | |
| | | |
| FS 741 | FS 751 | FS 755 |
| 46 | 47 | 48 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 641 | FS 651 | FS 655 |
| 41 | 42 | 43 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 453 + FS 425 | FS 457 + FS 425 | FS 458 + FS 425 |
| 51 | 52 | 53 |

| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| L1 FS 420 P | L2 FS 419 R |

| Gestelltyp / Type of die set | |
|------------------------------|--|
| | |
| | |
| | |

| Position der Haltestücke / Position of holding clamps | |
|---|--------|
| | |
| Pos. Z | Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-------------------------------|-----|-------------|-------------|-------------|-------------|-------------|-------------|----------|-----------------------|-----|--------------|--------------|--------------|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 46 41 | | | 47 42 | | | 48 43 | | | 51 X B | 52 X A | 53 X A | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | | | | | | | |
| 661 | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | 84,0 | |
| 662 | 400 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 238 | 219 | 138 | 222 | 211 | 122 | | | 93,5 | |
| | X | 48 | 48 | - | | | | | | | | X | X | X | X | X | X | | | | |
| | 300 | | | | | | | | | | | 300 | 400 | 400 | 300 | 400 | 400 | | | 103,0 | |
| 663 | | 58 | 48 | - | | 210 | 150 | 140 | | | | | | | | | | | | | |
| 664 | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | 97,5 | |
| 665 | 400 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 238 | 269 | 188 | 222 | 261 | 172 | | | 109,0 | |
| | X | 48 | 48 | - | | | | | | | | X | X | X | X | X | X | | | | |
| | 350 | | | | | | | | | | | 350 | 400 | 400 | 350 | 400 | 400 | | | 120,0 | |
| 666 | | 58 | 48 | - | | 210 | 150 | 140 | | | | | | | | | | | | | |
| 667 | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | 111,0 | |
| 668 | 400 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 238 | 319 | 238 | 222 | 311 | 222 | | | 124,0 | |
| | X | 48 | 48 | - | | | | | | | | X | X | X | X | X | X | | | | |
| | 400 | | | | | | | | | | | 400 | 400 | 400 | 400 | 400 | 400 | | | 137,0 | |
| 669 | | 58 | 48 | - | | 210 | 150 | 140 | | | | | | | | | | | | | |
| 670 | | 38 | 33 | - | | 160 | 120 | - | | | | | | | | | | | | 73,0 | |
| 671 | 500 | 38 | 38 | - | 30/32 | 170 | 130 | - | | | | 358 | 179 | 108 | 342 | 171 | 92 | | | 78,0 | |
| | X | 38 | 38 | - | | | | | | | | X | X | X | X | X | X | | | | |
| | 250 | | | | | | | | | | | 250 | 500 | 500 | 250 | 500 | 500 | | | 87,5 | |
| 672 | | 48 | 38 | - | | 180 | 130 | 120 | | | | | | | | | | | | | |
| 673 | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | 105,0 | |
| 674 | 500 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 338 | 219 | 138 | 322 | 211 | 122 | | | 116,0 | |
| | X | 48 | 48 | - | | | | | | | | X | X | X | X | X | X | | | | |
| | 300 | | | | | | | | | | | 300 | 500 | 500 | 300 | 500 | 500 | | | 128,0 | |
| 675 | | 58 | 48 | - | | 210 | 150 | 140 | | | | | | | | | | | | | |
| 676 | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | 122,0 | |
| 677 | 500 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 338 | 269 | 188 | 322 | 261 | 172 | | | 135,0 | |
| | X | 48 | 48 | - | | | | | | | | X | X | X | X | X | X | | | | |
| | 350 | | | | | | | | | | | 350 | 500 | 500 | 350 | 500 | 500 | | | 149,0 | |
| 678 | | 58 | 48 | - | | 210 | 150 | 140 | | | | | | | | | | | | | |
| 679 | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | 138,0 | |
| 680 | 500 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 338 | 319 | 238 | 322 | 311 | 222 | | | 154,0 | |
| | X | 48 | 48 | - | | | | | | | | X | X | X | X | X | X | | | | |
| | 400 | | | | | | | | | | | 400 | 500 | 500 | 400 | 500 | 500 | | | 170,0 | |
| 681 | | 58 | 48 | - | | 210 | 150 | 140 | | | | | | | | | | | | | |
| 682 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | 213,0 | |
| 683 | 500 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 306 | 403 | 306 | 290 | 395 | 290 | | | 233,0 | |
| | X | 58 | 58 | - | | | | | | | | X | X | X | X | X | X | | | | |
| | 500 | | | | | | | | | | | 500 | 500 | 500 | 500 | 500 | 500 | | | 252,0 | |
| 684 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | |
| 685 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | 155,0 | |
| 686 | 600 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 406 | 203 | 106 | 390 | 195 | 90 | | | 169,0 | |
| | X | 58 | 58 | - | | | | | | | | X | X | X | X | X | X | | | | |
| | 300 | | | | | | | | | | | 300 | 600 | 600 | 300 | 600 | 600 | | | 183,0 | |
| 687 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | |
| 688 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | 180,0 | |
| 689 | 600 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 406 | 253 | 156 | 390 | 245 | 140 | | | 196,0 | |
| | X | 58 | 58 | - | | | | | | | | X | X | X | X | X | X | | | | |
| | 350 | | | | | | | | | | | 350 | 600 | 600 | 350 | 600 | 600 | | | 213,0 | |
| 690 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | |

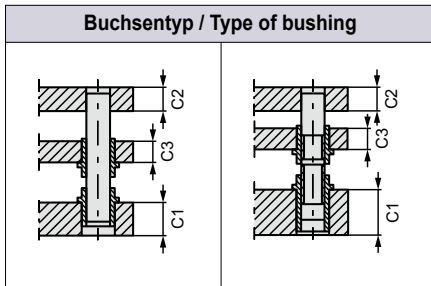
| Buchsentyp / Type of bushing | | |
|--|-----------------|-----------------|
| Sinterbuchse Leader pin bushing, sintered | | |
| | | |
| FS 741 | FS 751 | FS 755 |
| 46 | 47 | 48 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 641 | FS 651 | FS 655 |
| 41 | 42 | 43 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 453 + FS 425 | FS 457 + FS 425 | FS 458 + FS 425 |
| 51 | 52 | 53 |

| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 420 | FS 419 |
| P | R |

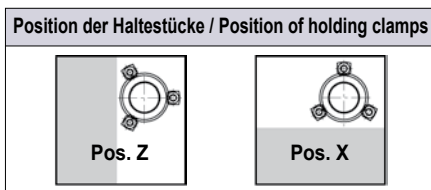
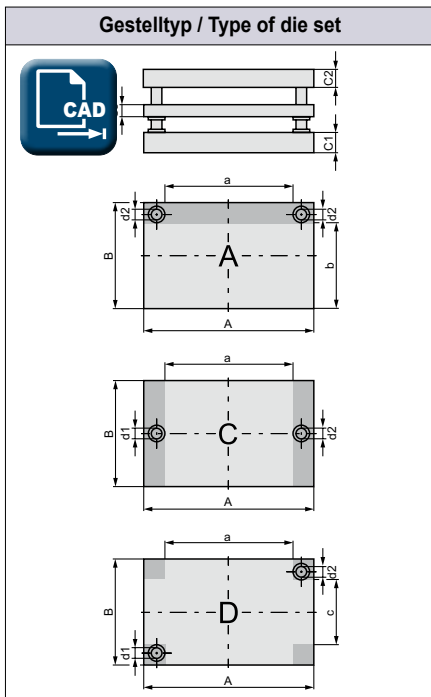
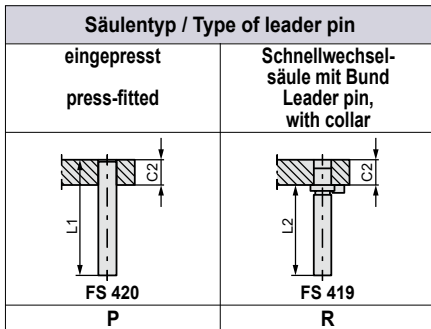
| Gestelltyp / Type of die set | |
|------------------------------|--|
| | |
| | |
| | |

| Position der Haltestücke / Position of holding clamps | |
|---|--------|
| | |
| Pos. Z | Pos. X |

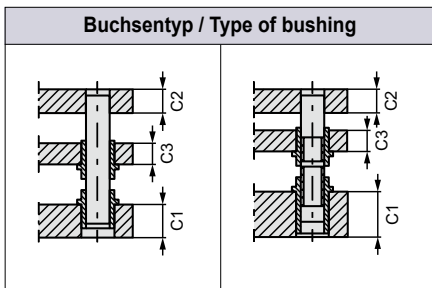
| Größe / Size | Abmessungen / Dimensions | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | | | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-------------------------------|-----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|-------------|-------------|--|--|----|-------|--|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 46 41 | | | 47 42 | | | 48 43 | | | 51 | | | 52 | | | 53 | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | | b X A | c X A | a X B | b X A | c X A | | | | | | |
| 691 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | | 205,0 | | |
| 692 | 600 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | | 406 | 303 | 206 | 390 | 295 | 190 | | | | | | | 224,0 | | |
| | X | | | | | | | | | | | | X | X | X | X | X | X | | | | | | | | | |
| | 400 | | | | | | | | | | | | 400 | 600 | 600 | 400 | 600 | 600 | | | | | | | 242,0 | | |
| 693 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | | |
| 694 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | | 254,0 | | |
| 695 | 600 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | | 406 | 403 | 306 | 390 | 395 | 290 | | | | | | | 278,0 | | |
| | X | | | | | | | | | | | | X | X | X | X | X | X | | | | | | | | | |
| | 500 | | | | | | | | | | | | 500 | 600 | 600 | 500 | 600 | 600 | | | | | | | 302,0 | | |
| 696 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | | |
| 697 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | | 305,0 | | |
| 698 | 600 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | | 406 | 503 | 406 | 390 | 495 | 390 | | | | | | | 333,0 | | |
| | X | | | | | | | | | | | | X | X | X | X | X | X | | | | | | | | | |
| | 600 | | | | | | | | | | | | 600 | 600 | 600 | 600 | 600 | 600 | | | | | | | 361,0 | | |
| 699 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | | |
| 700 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | | 209,0 | | |
| 701 | 700 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | | 506 | 253 | 156 | 490 | 245 | 140 | | | | | | | 228,0 | | |
| | X | | | | | | | | | | | | X | X | X | X | X | X | | | | | | | | | |
| | 350 | | | | | | | | | | | | 350 | 700 | 700 | 350 | 700 | 700 | | | | | | | 247,0 | | |
| 702 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | | |
| 703 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | | 238,0 | | |
| 704 | 700 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | | 506 | 303 | 206 | 490 | 295 | 190 | | | | | | | 260,0 | | |
| | X | | | | | | | | | | | | X | X | X | X | X | X | | | | | | | | | |
| | 400 | | | | | | | | | | | | 400 | 700 | 700 | 400 | 700 | 700 | | | | | | | 282,0 | | |
| 705 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | | |
| 706 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | | 296,0 | | |
| 707 | 700 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | | 506 | 403 | 306 | 490 | 395 | 290 | | | | | | | 324,0 | | |
| | X | | | | | | | | | | | | X | X | X | X | X | X | | | | | | | | | |
| | 500 | | | | | | | | | | | | 500 | 700 | 700 | 500 | 700 | 700 | | | | | | | 351,0 | | |
| 708 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | | |
| 709 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | | 354,0 | | |
| 710 | 700 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | | 506 | 503 | 406 | 490 | 495 | 390 | | | | | | | 388,0 | | |
| | X | | | | | | | | | | | | X | X | X | X | X | X | | | | | | | | | |
| | 600 | | | | | | | | | | | | 600 | 700 | 700 | 600 | 700 | 700 | | | | | | | 420,0 | | |
| 711 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | | |
| 712 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | | 271,0 | | |
| 713 | 800 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | | 606 | 303 | 206 | 590 | 295 | 190 | | | | | | | 296,0 | | |
| | X | | | | | | | | | | | | X | X | X | X | X | X | | | | | | | | | |
| | 400 | | | | | | | | | | | | 400 | 800 | 800 | 400 | 800 | 800 | | | | | | | 321,0 | | |
| 714 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | | |
| 715 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | | 338,0 | | |
| 716 | 800 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | | 606 | 403 | 306 | 590 | 395 | 290 | | | | | | | 369,0 | | |
| | X | | | | | | | | | | | | X | X | X | X | X | X | | | | | | | | | |
| | 500 | | | | | | | | | | | | 500 | 800 | 800 | 500 | 800 | 800 | | | | | | | 400,0 | | |
| 717 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | | |
| 718 | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | | 404,0 | | |
| 719 | 800 | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | | 606 | 503 | 406 | 590 | 495 | 390 | | | | | | | 442,0 | | |
| | X | | | | | | | | | | | | X | X | X | X | X | X | | | | | | | | | |
| | 600 | | | | | | | | | | | | 600 | 800 | 800 | 600 | 800 | 800 | | | | | | | 480,0 | | |
| 720 | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | | |



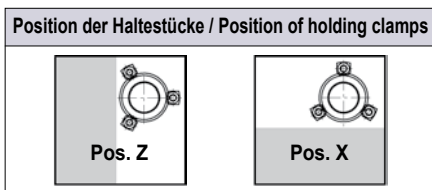
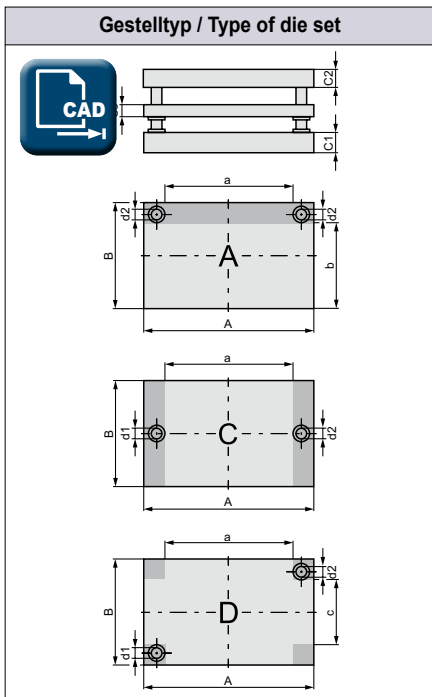
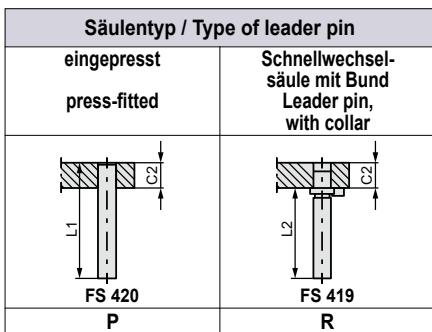
| | |
|---|---------------------|
| Sinterbuche Leader pin bushing, sintered | |
| C1: FS 741 | C1: FS 732 |
| C3: FS 731 | C3: FS 731 |
| 88 | 87 |
| Stahlbuche mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 641 | C1: FS 632 |
| C3: FS 631 | C3: FS 631 |
| 71 | 72 |
| Stahlbuche mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 458 + FS 425 | C1: FS 453 + FS 425 |
| C3: FS 457 + FS 425 | C3: FS 457 + FS 425 |
| 91 | 92 |



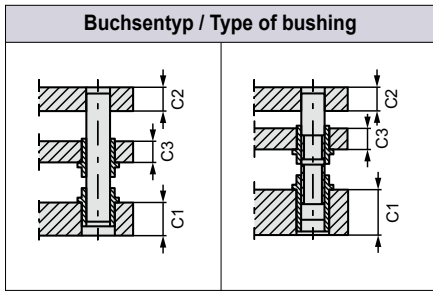
| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-----|-----|------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 88 71 | | | 87 72 | | | 91 92 | | | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | | c X A | | | |
| 601 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | | | | 9,4 | |
| 602 | 125 | | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 27 | 76 | 27 | | | | | 70 | | 11,2 |
| | 125 | | | | | | | | | | | 125 | 125 | 125 | | | | | 125 | | |
| 603 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | | | | | 12,4 |
| 604 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | | | | | 11,7 |
| 605 | 160 | | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 62 | 76 | 27 | 50 | 70 | | | | | 14,2 |
| | 125 | | | | | | | | | | | 125 | 160 | 160 | 125 | 160 | | | | | |
| 606 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | | | | | 15,8 |
| 607 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | | | | | 14,8 |
| 608 | 160 | | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 62 | 111 | 62 | 50 | 105 | 50 | | | | 17,8 |
| | 160 | | | | | | | | | | | 160 | 160 | 160 | 160 | 160 | | | | | |
| 609 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | | | | | 19,8 |
| 610 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | | | | | 14,4 |
| 611 | 200 | | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 102 | 76 | 27 | 90 | 70 | | | | | 17,4 |
| | 125 | | | | | | | | | | | 125 | 200 | 200 | 125 | 200 | | | | | |
| 612 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | | | | | 19,4 |
| 613 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | | | | | 22,3 |
| 614 | 200 | | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 82 | 101 | 42 | 70 | 95 | | | | | 28,4 |
| | 160 | | | | | | | | | | | 160 | 200 | 200 | 160 | 200 | | | | | |
| 615 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | | | | | 30,9 |
| 616 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | | | | | 27,5 |
| 617 | 200 | | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 82 | 141 | 82 | 70 | 135 | 70 | | | | 35,2 |
| | 200 | | | | | | | | | | | 200 | 200 | 200 | 200 | 200 | | | | | |
| 618 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | | | | | 38,4 |
| 619 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | | | | | 21,8 |
| 620 | 250 | | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 132 | 66 | | 120 | 60 | | | | | 27,8 |
| | 125 | | | | | | | | | | | 125 | 250 | | 125 | 250 | | | | | |
| 621 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | | | | | 30,2 |
| 622 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | | | | | 27,5 |
| 623 | 250 | | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 132 | 101 | 42 | 120 | 95 | | | | | 35,2 |
| | 160 | | | | | | | | | | | 160 | 250 | 250 | 160 | 250 | | | | | |
| 624 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | | | | | 38,4 |
| 625 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | | | | | 34,2 |
| 626 | 250 | | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 132 | 141 | 82 | 120 | 135 | 70 | | | | 43,8 |
| | 200 | | | | | | | | | | | 200 | 250 | 250 | 200 | 250 | | | | | |
| 627 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | | | | | 47,7 |
| 628 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | | | | | 50,5 |
| 629 | 250 | | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | | 108 | 179 | 108 | 92 | 171 | 92 | | | | 57,5 |
| | 250 | | | | | | | | | | | 250 | 250 | 250 | 250 | 250 | | | | | |
| 630 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | | | | | 62,5 |



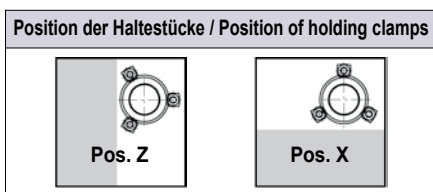
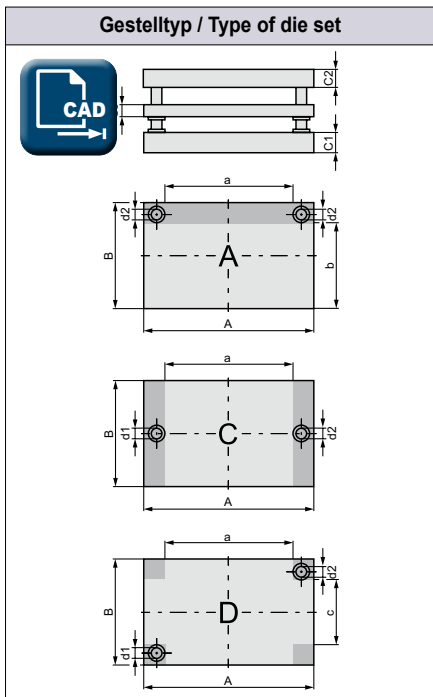
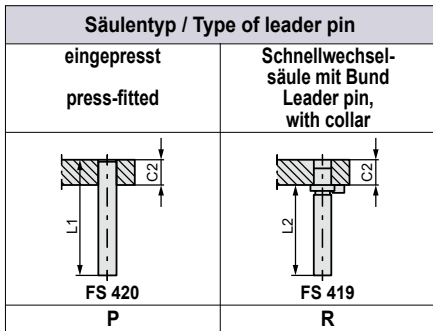
| | |
|---|---------------------|
| Sinterbuche Leader pin bushing, sintered | |
| C1: FS 741 | C1: FS 732 |
| C3: FS 731 | C3: FS 731 |
| 88 | 87 |
| Stahlbuche mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 641 | C1: FS 632 |
| C3: FS 631 | C3: FS 631 |
| 71 | 72 |
| Stahlbuche mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 458 + FS 425 | C1: FS 453 + FS 425 |
| C3: FS 457 + FS 425 | C3: FS 457 + FS 425 |
| 91 | 92 |



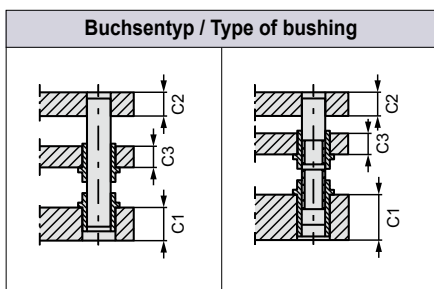
| Größe / Size | Abmessungen / Dimensions | | | | | | Arbeitsflächen / Working area | | | | | | | | Gewicht / Weight [kg] | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-------------------------------|-----|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-----|-------|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 88 71 72 | | | 91 92 | | | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | | | | |
| 631 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | 32,8 | |
| | 300 | | | | | | | | | | | | | | | | | |
| 632 | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 182 | 101 | 42 | 170 | 95 | 42,1 | |
| | 160 | | | | | | | | | | | 160 | 300 | 300 | 160 | 300 | | |
| 633 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | 45,9 | |
| 634 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | 40,7 | |
| | 300 | | | | | | | | | | | | | | | | | |
| 635 | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 182 | 141 | 82 | 170 | 135 | 76 | 52,5 |
| | 200 | | | | | | | | | | | 200 | 300 | 300 | 200 | 300 | 300 | |
| 636 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | 57,5 | |
| 637 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 60,0 | |
| | 300 | | | | | | | | | | | | | | | | | |
| 638 | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | | 158 | 179 | 108 | 142 | 171 | 92 | 69,0 |
| | 250 | | | | | | | | | | | 250 | 300 | 300 | 250 | 300 | 300 | |
| 639 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | 74,5 | |
| 640 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 71,5 | |
| | 300 | | | | | | | | | | | | | | | | | |
| 641 | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | | 158 | 229 | 158 | 142 | 221 | 142 | 82,5 |
| | 300 | | | | | | | | | | | 300 | 300 | 300 | 300 | 300 | 300 | |
| 642 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | 89,5 | |
| 643 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | 47,3 | |
| | 350 | | | | | | | | | | | | | | | | | |
| 644 | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 232 | 141 | 82 | 220 | 135 | 70 | 60,5 |
| | 200 | | | | | | | | | | | 200 | 350 | 350 | 200 | 350 | 350 | |
| 645 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | 66,5 | |
| 646 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 69,5 | |
| | 350 | | | | | | | | | | | | | | | | | |
| 647 | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | | 208 | 179 | 108 | 192 | 171 | 92 | 80,0 |
| | 250 | | | | | | | | | | | 250 | 350 | 350 | 250 | 350 | 350 | |
| 648 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | 87,0 | |
| 649 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 101,0 | |
| | 350 | | | | | | | | | | | | | | | | | |
| 650 | X | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 188 | 219 | 138 | 172 | 211 | 122 | 118,0 |
| | 300 | | | | | | | | | | | 300 | 350 | 350 | 300 | 350 | 350 | |
| 651 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | 126,0 | |
| 652 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 118,0 | |
| | 350 | | | | | | | | | | | | | | | | | |
| 653 | X | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 188 | 269 | 188 | 172 | 261 | 172 | 137,0 |
| | 350 | | | | | | | | | | | 350 | 350 | 350 | 350 | 350 | 350 | |
| 654 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | 147,0 | |
| 655 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | 54,0 | |
| | 400 | | | | | | | | | | | | | | | | | |
| 656 | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 282 | 141 | 82 | 270 | 135 | 70 | 69,5 |
| | 200 | | | | | | | | | | | 200 | 400 | 400 | 200 | 400 | 400 | |
| 657 | | 48 | 48 | | | 200 | 150 | 130 | | | | | | | | | 75,0 | |
| 658 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 79,5 | |
| | 400 | | | | | | | | | | | | | | | | | |
| 659 | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | | 258 | 179 | 108 | 242 | 171 | 92 | 91,0 |
| | 250 | | | | | | | | | | | 250 | 400 | 400 | 250 | 400 | 400 | |
| 660 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | 99,0 | |



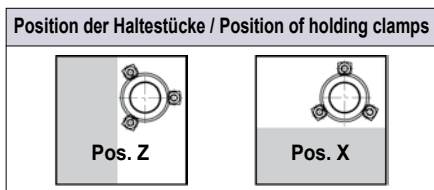
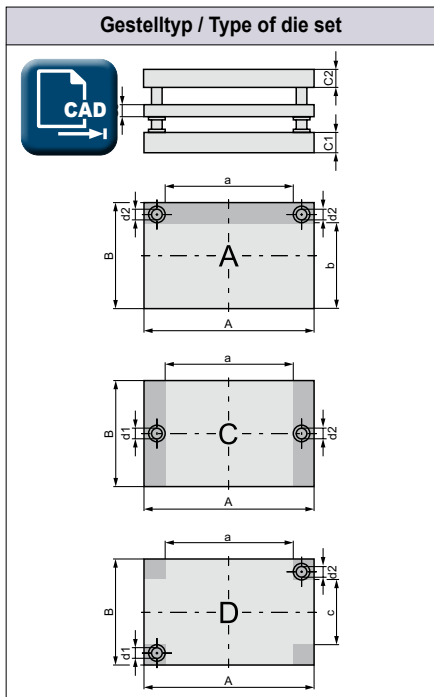
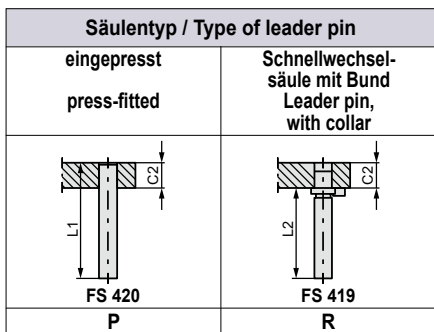
| | |
|---|--|
| Sinterbuche Leader pin bushing, sintered | |
| C1: FS 741 C3: FS 731 88 | C1: FS 732 C3: FS 731 87 |
| Stahlbuche mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 641 C3: FS 631 71 | C1: FS 632 C3: FS 631 72 |
| Stahlbuche mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 458 + FS 425 C3: FS 457 + FS 425 91 | C1: FS 453 + FS 425 C3: FS 457 + FS 425 92 |



| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-------------------------------|-------------|-------------|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------------|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 88 71 72 | | | 91 92 | | | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | | | | |
| 661 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 115,0 | |
| 662 | 400 X 300 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 238 X 300 | 219 X 400 | 138 X 400 | 222 X 300 | 211 X 400 | 122 X 400 | 134,0 |
| 663 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | 144,0 | |
| 664 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 134,0 | |
| 665 | 400 X 350 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 238 X 350 | 269 X 400 | 188 X 400 | 222 X 350 | 261 X 400 | 172 X 400 | 156,0 |
| 666 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | 167,0 | |
| 667 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 153,0 | |
| 668 | 400 X 400 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 238 X 400 | 319 X 400 | 238 X 400 | 222 X 400 | 311 X 400 | 222 X 400 | 178,0 |
| 669 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | 190,0 | |
| 670 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 99,0 | |
| 671 | 500 X 250 | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | | 358 X 250 | 179 X 500 | 108 X 500 | 342 X 250 | 171 X 500 | 92 X 500 | 114,0 |
| 672 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | 124,0 | |
| 673 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 143,0 | |
| 674 | 500 X 300 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 338 X 300 | 219 X 500 | 138 X 500 | 322 X 300 | 211 X 500 | 122 X 500 | 167,0 |
| 675 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | 179,0 | |
| 676 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 167,0 | |
| 677 | 500 X 350 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 338 X 350 | 269 X 500 | 188 X 500 | 322 X 350 | 261 X 500 | 172 X 500 | 194,0 |
| 678 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | 208,0 | |
| 679 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 190,0 | |
| 680 | 500 X 400 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 338 X 400 | 319 X 500 | 238 X 500 | 322 X 400 | 311 X 500 | 222 X 500 | 222,0 |
| 681 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | 237,0 | |
| 682 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 287,0 | |
| 683 | 500 X 500 | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 306 X 500 | 403 X 500 | 306 X 500 | 290 X 500 | 395 X 500 | 290 X 500 | 327,0 |
| 684 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | 346,0 | |
| 685 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 208,0 | |
| 686 | 600 X 300 | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 406 X 300 | 203 X 600 | 106 X 600 | 390 X 300 | 195 X 600 | 90 X 600 | 237,0 |
| 687 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | 251,0 | |
| 688 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 242,0 | |
| 689 | 600 X 350 | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 406 X 350 | 253 X 600 | 156 X 600 | 390 X 350 | 245 X 600 | 140 X 600 | 275,0 |
| 690 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | 292,0 | |



| Sinterbuche Leader pin bushing, sintered | |
|---|---------------------|
| C1: FS 741 | C1: FS 732 |
| C3: FS 731 | C3: FS 731 |
| 88 | 87 |
| Stahlbuche mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 641 | C1: FS 632 |
| C3: FS 631 | C3: FS 631 |
| 71 | 72 |
| Stahlbuche mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 458 + FS 425 | C1: FS 453 + FS 425 |
| C3: FS 457 + FS 425 | C3: FS 457 + FS 425 |
| 91 | 92 |



| Größe / Size | Abmessungen / Dimensions | | | | | | Arbeitsflächen / Working area | | | | | | Gewicht / Weight [kg] | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-------------------------------|-----|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-----|-------|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 88 71 72 | | | 91 92 | | | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | | b X A | c X A | | | |
| 691 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 276,0 | |
| | 600 | | | | | | | | | | | | | | | | | |
| 692 | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 406 | 303 | 206 | 390 | 295 | 190 | 314,0 |
| | 400 | | | | | | | | | | | 400 | 600 | 600 | 400 | 600 | 600 | |
| 693 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | | 333,0 |
| 694 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | | 344,0 |
| | 600 | | | | | | | | | | | | | | | | | |
| 695 | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 406 | 403 | 306 | 390 | 395 | 290 | 391,0 |
| | 500 | | | | | | | | | | | 500 | 600 | 600 | 500 | 600 | 600 | |
| 696 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | | 415,0 |
| 697 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | | 412,0 |
| | 600 | | | | | | | | | | | | | | | | | |
| 698 | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 406 | 503 | 406 | 390 | 495 | 390 | 468,0 |
| | 600 | | | | | | | | | | | 600 | 600 | 600 | 600 | 600 | 600 | |
| 699 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | | 497,0 |
| 700 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | | 282,0 |
| | 700 | | | | | | | | | | | | | | | | | |
| 701 | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 506 | 253 | 156 | 490 | 245 | 140 | 320,0 |
| | 350 | | | | | | | | | | | 350 | 700 | 700 | 350 | 700 | 700 | |
| 702 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | | 340,0 |
| 703 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | | 321,0 |
| | 700 | | | | | | | | | | | | | | | | | |
| 704 | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 506 | 303 | 206 | 490 | 295 | 190 | 365,0 |
| | 400 | | | | | | | | | | | 400 | 700 | 700 | 400 | 700 | 700 | |
| 705 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | | 387,0 |
| 706 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | | 400,0 |
| | 700 | | | | | | | | | | | | | | | | | |
| 707 | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 506 | 403 | 306 | 490 | 395 | 290 | 455,0 |
| | 500 | | | | | | | | | | | 500 | 700 | 700 | 500 | 700 | 700 | |
| 708 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | | 483,0 |
| 709 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | | 480,0 |
| | 700 | | | | | | | | | | | | | | | | | |
| 710 | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 506 | 503 | 406 | 490 | 495 | 390 | 545,0 |
| | 600 | | | | | | | | | | | 600 | 700 | 700 | 600 | 700 | 700 | |
| 711 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | | 579,0 |
| 712 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | | 366,0 |
| | 800 | | | | | | | | | | | | | | | | | |
| 713 | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 606 | 303 | 206 | 590 | 295 | 190 | 417,0 |
| | 400 | | | | | | | | | | | 400 | 800 | 800 | 400 | 800 | 800 | |
| 714 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | | 442,0 |
| 715 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | | 457,0 |
| | 800 | | | | | | | | | | | | | | | | | |
| 716 | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 606 | 403 | 306 | 590 | 395 | 290 | 520,0 |
| | 500 | | | | | | | | | | | 500 | 800 | 800 | 500 | 800 | 800 | |
| 717 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | | 551,0 |
| 718 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | | 547,0 |
| | 800 | | | | | | | | | | | | | | | | | |
| 719 | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | | 606 | 503 | 406 | 590 | 495 | 390 | 623,0 |
| | 600 | | | | | | | | | | | 600 | 800 | 800 | 600 | 800 | 800 | |
| 720 | | 68 | 68 | | | 260 | 200 | 180 | | | | | | | | | | 661,0 |

Säulengestelle aus Stahl, 2 Platten, 4 Säulen, Typ Q

Steel die sets, 2 plates, 4 posts, type Q



[SG]

SÄULENGESTELLE / DIE SETS

| Buchsentyp / Type of bushing | | |
|--|-----------------|-----------------|
| Sinterbuchse Leader pin bushing, sintered | | |
| | | |
| FS 741 | FS 751 | FS 755 |
| 46 | 47 | 48 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 641 | FS 651 | FS 655 |
| 41 | 42 | 43 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 453 + FS 425 | FS 457 + FS 425 | FS 458 + FS 425 |
| 51 | 52 | 53 |

| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 420 | FS 419 |
| P | R |

| Gestelltyp / Type of die set |
|------------------------------|
| |
| |

| Position der Haltestücke / Position of holding clamps |
|---|
| |
| |
| Pos. Z |
| Pos. X |

| Größe / Size | A X B | Abmessungen / Dimensions | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | | | | | | |
|--------------|-------------|-------------------------------|----|----|------------|----------------------------------|-----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|-------------|--|--|----|------|--|--|
| | | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 46 41 | | | 47 42 | | | 48 43 | | | 51 | | | 52 | | | 53 | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | | c X A | a X B | b X A | c X A | | | | | | |
| 601 | | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 7,8 | | |
| 602 | 125 | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 27 | 27 | | | | | | | | | | | | 8,4 | | |
| | X | 28 | 28 | - | | | | | | | | X | X | | | | | | | | | | | | | | |
| | 125 | 38 | 28 | - | | 150 | 110 | 100 | | | | 125 | 125 | | | | | | | | | | | | 9,7 | | |
| 603 | | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 9,5 | | |
| 604 | 160 | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 62 | 27 | | | | | | | | | | | | 10,4 | | |
| | X | 28 | 28 | - | | | | | | | | X | X | | | | | | | | | | | | | | |
| | 125 | 38 | 28 | - | | 150 | 110 | 100 | | | | 125 | 160 | | | | | | | | | | | | 11,9 | | |
| 605 | 160 | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 11,9 | | |
| 606 | X | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 62 | 62 | | | | | | | | | | | | 12,8 | | |
| | 160 | 38 | 28 | - | | 150 | 110 | 100 | | | | 160 | 160 | | | | | | | | | | | | 14,8 | | |
| 607 | 200 | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 11,5 | | |
| 608 | X | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 102 | 27 | | | | | | | | | | | | 12,5 | | |
| | 160 | 38 | 28 | - | | 150 | 110 | 100 | | | | 125 | 200 | | | | | | | | | | | | 14,5 | | |
| 609 | 200 | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 14,3 | | |
| 610 | X | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 102 | 62 | | | | | | | | | | | | 15,6 | | |
| | 125 | 38 | 28 | - | | 150 | 110 | 100 | | | | 125 | 200 | | | | | | | | | | | | 18,1 | | |
| 611 | 200 | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 17,5 | | |
| 612 | X | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 102 | 102 | | | | | | | | | | | | 19,1 | | |
| | 160 | 38 | 28 | - | | 150 | 110 | 100 | | | | 160 | 200 | | | | | | | | | | | | 22,3 | | |
| 613 | 250 | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 14,0 | | |
| 614 | X | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 152 | 27 | | | | | | | | | | | | 15,3 | | |
| | 160 | 38 | 28 | - | | 150 | 110 | 100 | | | | 125 | 250 | | | | | | | | | | | | 17,7 | | |
| 615 | 200 | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 17,5 | | |
| 616 | X | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 102 | 102 | | | | | | | | | | | | 19,1 | | |
| | 200 | 38 | 28 | - | | 150 | 110 | 100 | | | | 200 | 200 | | | | | | | | | | | | 22,3 | | |
| 617 | 250 | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 14,0 | | |
| 618 | X | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 152 | 82 | | | | | | | | | | | | 26,0 | | |
| | 125 | 38 | 28 | - | | 150 | 110 | 100 | | | | 125 | 250 | | | | | | | | | | | | 27,9 | | |
| 619 | 250 | 28 | 23 | - | | 130 | 100 | - | | | | | | | | | | | | | | | | | 17,5 | | |
| 620 | X | 28 | 28 | - | 18/19 | 140 | 110 | - | | | | 152 | 60 | | | | | | | | | | | | 19,1 | | |
| | 160 | 38 | 28 | - | | 150 | 110 | 100 | | | | 160 | 250 | | | | | | | | | | | | 22,3 | | |
| 621 | 250 | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 26,0 | | |
| 622 | X | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 132 | 82 | | | | | | | | | | | | 27,9 | | |
| | 200 | 48 | 38 | - | | 180 | 130 | 120 | | | | 200 | 250 | | | | | | | | | | | | 35,8 | | |
| 623 | 250 | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 14,0 | | |
| 624 | X | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 132 | 132 | | | | | | | | | | | | 32,0 | | |
| | 250 | 48 | 38 | - | | 170 | 130 | 120 | | | | 250 | 250 | | | | | | | | | | | | 34,4 | | |
| 625 | 250 | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 14,0 | | |
| 626 | X | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 132 | 132 | | | | | | | | | | | | 32,0 | | |
| | 250 | 48 | 38 | - | | 170 | 130 | 120 | | | | 250 | 250 | | | | | | | | | | | | 34,4 | | |
| 627 | 250 | 33 | 28 | - | | 150 | 110 | - | | | | | | | | | | | | | | | | | 14,0 | | |
| 628 | X | 33 | 33 | - | 24/25 | 160 | 120 | - | | | | 132 | 132 | | | | | | | | | | | | 32,0 | | |
| | 250 | 48 | 38 | - | | 170 | 130 | 120 | | | | 250 | 250 | | | | | | | | | | | | 34,4 | | |
| 629 | 250 | 48 | 38 | - | | 170 | 130 | 120 | | | | | | | | | | | | | | | | | 44,2 | | |
| 630 | X | 48 | 38 | - | | | | | | | | | | | | | | | | | | | | | 44,2 | | |

Säulengestelle aus Stahl, 2 Platten, 4 Säulen, Typ Q

Steel die sets, 2 plates, 4 posts, type Q



[SG]

SÄULENGESTELLE / DIE SETS

| Buchsentyp / Type of bushing | | |
|---|-----------------------|-----------------------|
| Sinterbuchse Leader pin bushing, sintered | | |
| | | |
| FS 741 46 | FS 751 47 | FS 755 48 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 641 41 | FS 651 42 | FS 655 43 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 453 + FS 425 51 | FS 457 + FS 425 52 | FS 458 + FS 425 53 |

| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 420 P | FS 419 R |

| Gestelltyp / Type of die set |
|------------------------------|
| |
| |

| Position der Haltestücke / Position of holding clamps |
|---|
| |
| |

| Größe / Size | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | | | | | |
|--------------|-------------|----------------------------------|--------|--------|------------|-------------------------------------|--------|-------------|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|-----------------------|--------|--------|----|--|--|--|------|-------|--|
| | | C1 | C2 | C3 | | L1 | L2 | L3 | 46 41 | | | 47 42 | | | 48 43 | | | | 51 | 52 | 53 | | | | | | |
| | | X B | X A | X A | X B | X A | X A | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | c X A | X B | | X A | X A | | | | | | | |
| 661 | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | | | | | | 87,0 | | |
| 662 | 400 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 238 | 138 | | | | | | | | | | | | | 96,5 | |
| | 300 | 58 | 48 | - | | 210 | 150 | 140 | | | | 300 | 400 | | | | | | | | | | | | | 106,0 | |
| 663 | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | | | | | | | 101,0 | |
| 664 | 400 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 238 | 188 | | | | | | | | | | | | | 112,0 | |
| 665 | X | 58 | 48 | - | | 210 | 150 | 140 | | | | 350 | 400 | | | | | | | | | | | | | 123,0 | |
| 666 | 350 | | | | | | | | | | | | | | | | | | | | | | | | | 114,0 | |
| 667 | 400 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 238 | 238 | | | | | | | | | | | | | 127,0 | |
| 668 | X | 58 | 48 | - | | 210 | 150 | 140 | | | | 400 | 400 | | | | | | | | | | | | | 140,0 | |
| 669 | 400 | | | | | | | | | | | | | | | | | | | | | | | | | 73,0 | |
| 670 | 500 | 38 | 33 | - | | 160 | 120 | - | | | | 358 | 108 | | | | | | | | | | | | | 78,0 | |
| 671 | X | 38 | 38 | - | 30/32 | 170 | 130 | - | | | | 250 | 500 | | | | | | | | | | | | | 87,5 | |
| 672 | 250 | | | | | | | | | | | | | | | | | | | | | | | | | 108,0 | |
| 673 | 500 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 338 | 138 | | | | | | | | | | | | | 119,0 | |
| 674 | X | 58 | 48 | - | | 210 | 150 | 140 | | | | 300 | 500 | | | | | | | | | | | | | 131,0 | |
| 675 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | 125,0 | |
| 676 | 500 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 338 | 188 | | | | | | | | | | | | | 138,0 | |
| 677 | X | 58 | 48 | - | | 210 | 150 | 140 | | | | 350 | 500 | | | | | | | | | | | | | 152,0 | |
| 678 | 350 | | | | | | | | | | | | | | | | | | | | | | | | | 141,0 | |
| 679 | 500 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 338 | 238 | | | | | | | | | | | | | 157,0 | |
| 680 | X | 58 | 48 | - | | 210 | 150 | 140 | | | | 400 | 500 | | | | | | | | | | | | | 173,0 | |
| 681 | 400 | | | | | | | | | | | | | | | | | | | | | | | | | 175,0 | |
| 682 | 500 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 338 | 338 | | | | | | | | | | | | | 195,0 | |
| 683 | X | 58 | 48 | - | | 210 | 150 | 140 | | | | 500 | 500 | | | | | | | | | | | | | 214,0 | |
| 684 | 500 | | | | | | | | | | | | | | | | | | | | | | | | | 128,0 | |
| 685 | 600 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 438 | 138 | | | | | | | | | | | | | 142,0 | |
| 686 | X | 58 | 48 | - | | 210 | 150 | 140 | | | | 300 | 600 | | | | | | | | | | | | | 156,0 | |
| 687 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | 148,0 | |
| 688 | 600 | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 438 | 188 | | | | | | | | | | | | | 165,0 | |
| 689 | X | 58 | 48 | - | | 210 | 150 | 140 | | | | 350 | 600 | | | | | | | | | | | | | 181,0 | |
| 690 | 350 | | | | | | | | | | | | | | | | | | | | | | | | | | |

Säulengestelle aus Stahl, 2 Platten, 4 Säulen, Typ Q

Steel die sets, 2 plates, 4 posts, type Q



SÄULENGESTELLE / DIE SETS

| Buchsentyp / Type of bushing | | |
|--|-----------------|-----------------|
| Sinterbuchse Leader pin bushing, sintered | | |
| | | |
| FS 741 | FS 751 | FS 755 |
| 46 | 47 | 48 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 641 | FS 651 | FS 655 |
| 41 | 42 | 43 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 453 + FS 425 | FS 457 + FS 425 | FS 458 + FS 425 |
| 51 | 52 | 53 |

| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 420 | FS 419 |
| P | R |

| Gestelltyp / Type of die set |
|------------------------------|
| |
| |

| Position der Haltestücke / Position of holding clamps |
|---|
| |
| |
| Pos. Z |
| Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | | | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-------------------------------|-----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|-------------|-------------|-----|--|----|-------|--|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 46 41 | | | 47 42 | | | 48 43 | | | 51 | | | 52 | | | 53 | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | | b X A | c X A | a X B | b X A | c X A | | | | | | |
| 691 | | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | | | | | 168,0 | | |
| 692 | 600 | | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 438 | 238 | | | | | | | 422 | 222 | | | 187,0 | | |
| | X | | | | | | | | | | | | X | X | | | | | | | X | X | | | | | |
| | 400 | | | | | | | | | | | | 400 | 600 | | | | | | | 400 | 600 | | | 206,0 | | |
| 693 | | | 58 | 48 | - | | 210 | 150 | 140 | | | | | | | | | | | | | | | | | | |
| 694 | | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | 259,0 | | |
| 695 | 600 | | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 406 | 306 | | | | | | | 390 | 290 | | | 283,0 | | |
| | X | | | | | | | | | | | | X | X | | | | | | | X | X | | | | | |
| | 500 | | | | | | | | | | | | 500 | 600 | | | | | | | 500 | 600 | | | 306,0 | | |
| 696 | | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | |
| 697 | | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | 309,0 | | |
| 698 | 600 | | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 406 | 406 | | | | | | | 390 | 390 | | | 337,0 | | |
| | X | | | | | | | | | | | | X | X | | | | | | | X | X | | | | | |
| | 600 | | | | | | | | | | | | 600 | 600 | | | | | | | 600 | 600 | | | 365,0 | | |
| 699 | | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | |
| 700 | | | 48 | 38 | - | | 190 | 140 | - | | | | | | | | | | | | | | | | 172,0 | | |
| 701 | 700 | | 48 | 48 | - | 40/42 | 200 | 150 | - | | | | 538 | 188 | | | | | | | 522 | 172 | | | 191,0 | | |
| | X | | | | | | | | | | | | X | X | | | | | | | X | X | | | | | |
| | 350 | | | | | | | | | | | | 350 | 700 | | | | | | | 350 | 700 | | | 210,0 | | |
| 702 | | | 58 | 48 | - | | 210 | 150 | 140 | | | | | | | | | | | | | | | | | | |
| 703 | | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | 242,0 | | |
| 704 | 700 | | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 506 | 206 | | | | | | | 490 | 190 | | | 264,0 | | |
| | X | | | | | | | | | | | | X | X | | | | | | | X | X | | | | | |
| | 400 | | | | | | | | | | | | 400 | 700 | | | | | | | 400 | 700 | | | 286,0 | | |
| 705 | | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | |
| 706 | | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | 300,0 | | |
| 707 | 700 | | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 506 | 306 | | | | | | | 490 | 290 | | | 328,0 | | |
| | X | | | | | | | | | | | | X | X | | | | | | | X | X | | | | | |
| | 500 | | | | | | | | | | | | 500 | 700 | | | | | | | 500 | 700 | | | 356,0 | | |
| 708 | | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | |
| 709 | | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | 359,0 | | |
| 710 | 700 | | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 506 | 406 | | | | | | | 490 | 390 | | | 392,0 | | |
| | X | | | | | | | | | | | | X | X | | | | | | | X | X | | | | | |
| | 600 | | | | | | | | | | | | 600 | 700 | | | | | | | 600 | 700 | | | 425,0 | | |
| 711 | | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | |
| 712 | | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | 276,0 | | |
| 713 | 800 | | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 606 | 206 | | | | | | | 590 | 190 | | | 301,0 | | |
| | X | | | | | | | | | | | | X | X | | | | | | | X | X | | | | | |
| | 400 | | | | | | | | | | | | 400 | 800 | | | | | | | 400 | 800 | | | 326,0 | | |
| 714 | | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | |
| 715 | | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | 342,0 | | |
| 716 | 800 | | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 606 | 306 | | | | | | | 590 | 290 | | | 374,0 | | |
| | X | | | | | | | | | | | | X | X | | | | | | | X | X | | | | | |
| | 500 | | | | | | | | | | | | 500 | 800 | | | | | | | 500 | 800 | | | 405,0 | | |
| 717 | | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | |
| 718 | | | 58 | 48 | - | | 220 | 160 | - | | | | | | | | | | | | | | | | 409,0 | | |
| 719 | 800 | | 58 | 58 | - | 50/52 | 230 | 170 | - | | | | 606 | 406 | | | | | | | 590 | 390 | | | 447,0 | | |
| | X | | | | | | | | | | | | X | X | | | | | | | X | X | | | | | |
| | 600 | | | | | | | | | | | | 600 | 800 | | | | | | | 600 | 800 | | | 484,0 | | |
| 720 | | | 68 | 58 | - | | 240 | 170 | 160 | | | | | | | | | | | | | | | | | | |



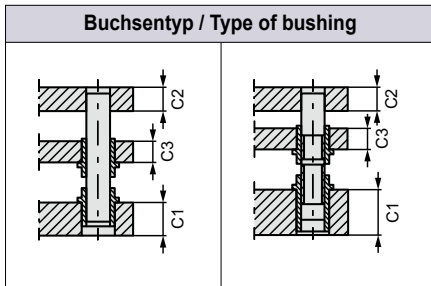
Säulengestelle aus Stahl, 3 Platten, 4 Säulen, Typ Q

Steel die sets, 3 plates, 4 posts, type Q

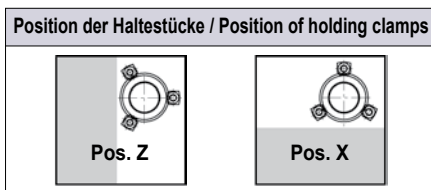
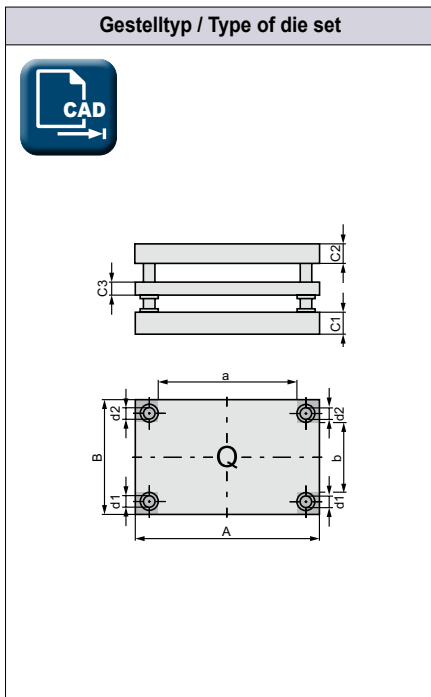
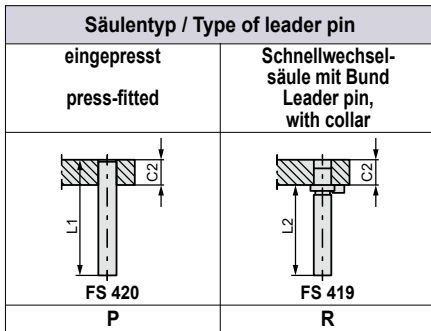


[SG]

SÄULENGESTELLE / DIE SETS



| | |
|---|--|
| Sinterbuche Leader pin bushing, sintered | |
| C1: FS 741 C3: FS 731 88 | C1: FS 732 C3: FS 731 87 |
| Stahlbuche mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 641 C3: FS 631 71 | C1: FS 632 C3: FS 631 72 |
| Stahlbuche mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 458 + FS 425 C3: FS 457 + FS 425 91 | C1: FS 453 + FS 425 C3: FS 457 + FS 425 92 |



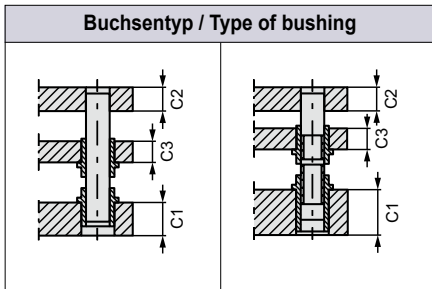
| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-------------------------------|-------------|-------------|-------------|-----------------|-----------------|-------------|-----------------|-----------------|-----------------------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 88 71 72 | | | 91 92 | | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | | | |
| 601 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | 10,0 |
| 602 | 125 X 125 | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 27 X 125 | 27 X 125 | | | | 11,8 |
| 603 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | 13,1 |
| 604 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | 12,4 |
| 605 | 160 X 125 | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 62 X 125 | 27 X 160 | | | | 14,2 |
| 606 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | 16,3 |
| 607 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | 15,4 |
| 608 | 160 X 160 | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 62 X 160 | 62 X 160 | | 50 X 160 | 50 X 160 | 18,4 |
| 609 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | 20,4 |
| 610 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | 15,1 |
| 611 | 200 X 125 | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 102 X 125 | 27 X 200 | | 90 X 125 | | 18,0 |
| 612 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | 20,0 |
| 613 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | 18,9 |
| 614 | 200 X 160 | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 102 X 160 | 62 X 200 | | 90 X 160 | 50 X 200 | 22,6 |
| 615 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | 25,2 |
| 616 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | 23,2 |
| 617 | 200 X 200 | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 102 X 200 | 102 X 200 | | 90 X 200 | 90 X 200 | 27,9 |
| 618 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | 31,1 |
| 619 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | 18,5 |
| 620 | 250 X 125 | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 152 X 125 | 27 X 250 | | 140 X 125 | | 22,1 |
| 621 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | 24,6 |
| 622 | | 28 | 23 | | | 140 | 120 | - | | | | | | | | | 23,2 |
| 623 | 250 X 160 | 38 | 28 | 18 | 18/19 | 160 | 130 | - | | | | 152 X 160 | 60 X 250 | | 140 X 160 | 50 X 250 | 27,9 |
| 624 | | 38 | 38 | | | 170 | 130 | 120 | | | | | | | | | 31,1 |
| 625 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | 35,0 |
| 626 | 250 X 200 | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 132 X 200 | 82 X 250 | | 120 X 200 | 70 X 250 | 44,8 |
| 627 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | 48,7 |
| 628 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | 43,2 |
| 629 | 250 X 250 | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | | 132 X 250 | 132 X 250 | | 120 X 250 | 120 X 250 | 55,5 |
| 630 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | 60,5 |

Säulengestelle aus Stahl, 3 Platten, 4 Säulen, Typ Q

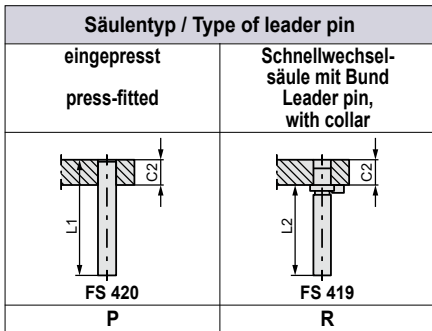
Steel die sets, 3 plates, 4 posts, type Q



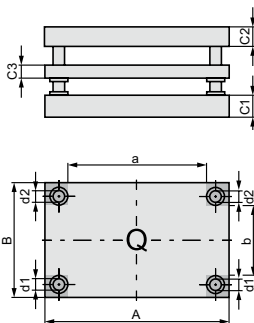
SÄULENGESTELLE / DIE SETS



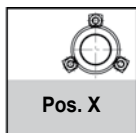
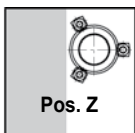
| | |
|--|---------------------|
| Sinterbuche Leader pin bushing, sintered | |
| C1: FS 741 | C1: FS 732 |
| C3: FS 731 | C3: FS 731 |
| 88 | 87 |
| Stahlbuche mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 641 | C1: FS 632 |
| C3: FS 631 | C3: FS 631 |
| 71 | 72 |
| Stahlbuche mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 458 + FS 425 | C1: FS 453 + FS 425 |
| C3: FS 457 + FS 425 | C3: FS 457 + FS 425 |
| 91 | 92 |



Gestelltyp / Type of die set



Position der Haltestücke / Position of holding clamps



| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | | | Gewicht / Weight [kg] | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-----|-----------------------|-------|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 88 71 72 | | | 91 92 | | | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | | | | |
| 631 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | 33,7 | |
| 632 | 300 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | 182 | 42 | | 170 | 30 | | 43,1 | |
| 633 | 160 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 150 | 140 | | | 160 | 300 | | 160 | 300 | | 46,9 | |
| 634 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | 41,6 | |
| 635 | 300 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | 182 | 82 | | 170 | 70 | | 53,5 | |
| 636 | 200 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 150 | 140 | | | 200 | 300 | | 200 | 300 | | 58,5 | |
| 637 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 61,5 | |
| 638 | 300 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | 158 | 108 | | 142 | 92 | | 70,5 | |
| 639 | 250 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 150 | 140 | | | 250 | 300 | | 250 | 300 | | 76,0 | |
| 640 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 73,0 | |
| 641 | 300 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | 158 | 158 | | 142 | 142 | | 83,5 | |
| 642 | 300 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 150 | 140 | | | 300 | 300 | | 300 | 300 | | 90,5 | |
| 643 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | 48,2 | |
| 644 | 350 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | 232 | 82 | | 220 | 70 | | 62,0 | |
| 645 | 200 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 150 | 140 | | | 200 | 350 | | 200 | 350 | | 67,5 | |
| 646 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 71,0 | |
| 647 | 350 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | 208 | 108 | | 192 | 92 | | 81,5 | |
| 648 | 250 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 150 | 140 | | | 250 | 350 | | 250 | 350 | | 88,5 | |
| 649 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 85,0 | |
| 650 | 350 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | 208 | 158 | | 192 | 142 | | 97,0 | |
| 651 | 300 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 150 | 140 | | | 300 | 350 | | 300 | 350 | | 105,0 | |
| 652 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 98,5 | |
| 653 | 350 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | 208 | 208 | | 192 | 192 | | 113,0 | |
| 654 | 350 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 150 | 140 | | | 350 | 350 | | 350 | 350 | | 123,0 | |
| 655 | | 33 | 28 | | | 160 | 130 | - | | | | | | | | | 55,0 | |
| 656 | 400 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 190 | 150 | - | | | 282 | 82 | | 270 | 70 | | 70,5 | |
| 657 | 200 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 150 | 130 | | | 200 | 400 | | 200 | 400 | | 77,0 | |
| 658 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | 81,0 | |
| 659 | 400 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | 258 | 108 | | 242 | 92 | | 92,5 | |
| 660 | 250 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 150 | 140 | | | 250 | 400 | | 250 | 400 | | 101,0 | |



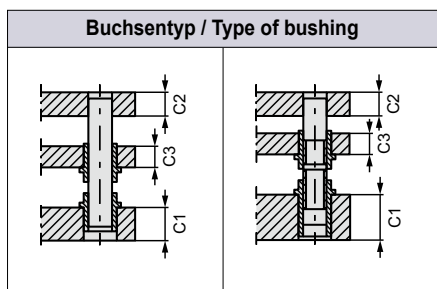
Säulengestelle aus Stahl, 3 Platten, 4 Säulen, Typ Q

Steel die sets, 3 plates, 4 posts, type Q

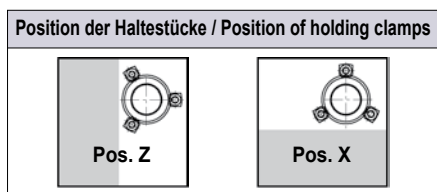
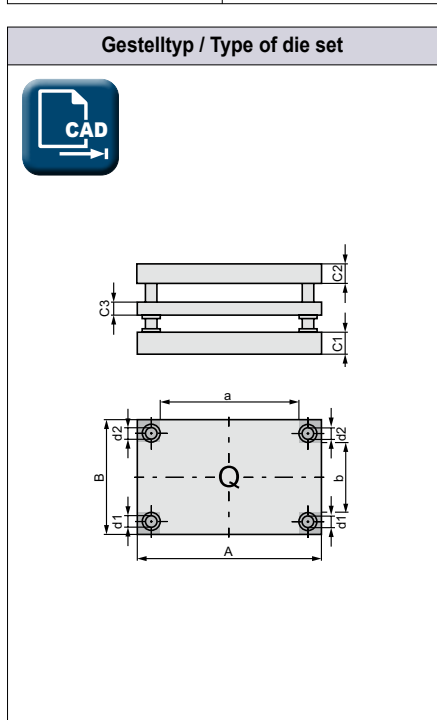
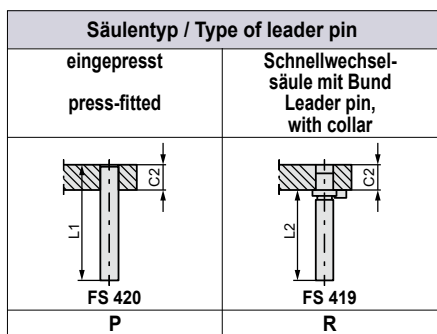


[SG]

SÄULENGESTELLE / DIE SETS



| Sinterbuchse Leader pin bushing, sintered | |
|--|--|
| C1: FS 741 C3: FS 731 88 | C1: FS 732 C3: FS 731 87 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 641 C3: FS 631 71 | C1: FS 632 C3: FS 631 72 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 458 + FS 425 C3: FS 457 + FS 425 91 | C1: FS 453 + FS 425 C3: FS 457 + FS 425 92 |



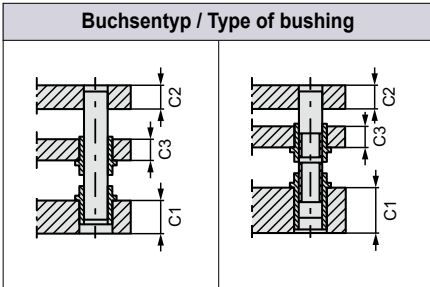
| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|--|--|--|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 88 71 | | | 87 72 | | | 91 | | | 92 | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | | c X A | | | | |
| 661 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | 118,0 |
| 662 | 400 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 238 | 138 | | | | 222 | 122 | | | | 137,0 |
| | X | | | | | | | | | | | X | X | | | X | X | | | | | |
| | 300 | | | | | | | | | | | 300 | 400 | | | 300 | 400 | | | | | 147,0 |
| 663 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | | | | | | |
| 664 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | 137,0 |
| 665 | 400 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 238 | 188 | | | 222 | 172 | | | | | 159,0 |
| | X | | | | | | | | | | | X | X | | | X | X | | | | | |
| | 350 | | | | | | | | | | | 350 | 400 | | | 350 | 400 | | | | | 170,0 |
| 666 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | | | | | | |
| 667 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | 156,0 |
| 668 | 400 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 238 | 238 | | | 222 | 222 | | | | | 181,0 |
| | X | | | | | | | | | | | X | X | | | X | X | | | | | |
| | 400 | | | | | | | | | | | 400 | 400 | | | 400 | 400 | | | | | 194,0 |
| 669 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | | | | | | |
| 670 | | 38 | 33 | | | 170 | 140 | - | | | | | | | | | | | | | | 100,0 |
| 671 | 500 | 48 | 38 | 28 | 30/32 | 190 | 150 | - | | | | 358 | 108 | | | 342 | 92 | | | | | 115,0 |
| | X | | | | | | | | | | | X | X | | | X | X | | | | | |
| | 250 | | | | | | | | | | | 250 | 500 | | | 250 | 500 | | | | | 125,0 |
| 672 | | 48 | 48 | | | 200 | 150 | 140 | | | | | | | | | | | | | | |
| 673 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | 146,0 |
| 674 | 500 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 338 | 138 | | | 322 | 122 | | | | | 170,0 |
| | X | | | | | | | | | | | X | X | | | X | X | | | | | |
| | 300 | | | | | | | | | | | 300 | 500 | | | 300 | 500 | | | | | 182,0 |
| 675 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | | | | | | |
| 676 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | 170,0 |
| 677 | 500 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 338 | 188 | | | 322 | 172 | | | | | 197,0 |
| | X | | | | | | | | | | | X | X | | | X | X | | | | | |
| | 350 | | | | | | | | | | | 350 | 500 | | | 350 | 500 | | | | | 211,0 |
| 678 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | | | | | | |
| 679 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | 193,0 |
| 680 | 500 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 338 | 238 | | | 322 | 222 | | | | | 225,0 |
| | X | | | | | | | | | | | X | X | | | X | X | | | | | |
| | 400 | | | | | | | | | | | 400 | 500 | | | 400 | 500 | | | | | 240,0 |
| 681 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | | | | | | |
| 682 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | 240,0 |
| 683 | 500 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 338 | 338 | | | 322 | 322 | | | | | 279,0 |
| | X | | | | | | | | | | | X | X | | | X | X | | | | | |
| | 500 | | | | | | | | | | | 500 | 500 | | | 500 | 500 | | | | | 299,0 |
| 684 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | | | | | | |
| 685 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | 174,0 |
| 686 | 600 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 438 | 138 | | | 422 | 122 | | | | | 203,0 |
| | X | | | | | | | | | | | X | X | | | X | X | | | | | |
| | 300 | | | | | | | | | | | 300 | 600 | | | 300 | 600 | | | | | 217,0 |
| 687 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | | | | | | |
| 688 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | 202,0 |
| 689 | 600 | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | | 438 | 188 | | | 422 | 172 | | | | | 235,0 |
| | X | | | | | | | | | | | X | X | | | X | X | | | | | |
| | 350 | | | | | | | | | | | 350 | 600 | | | 350 | 600 | | | | | 252,0 |
| 690 | | 58 | 58 | | | 230 | 170 | 160 | | | | | | | | | | | | | | |

Säulengestelle aus Stahl, 3 Platten, 4 Säulen, Typ Q

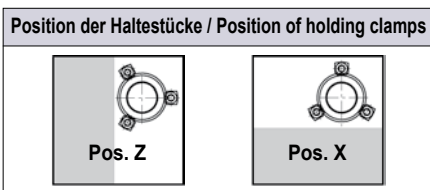
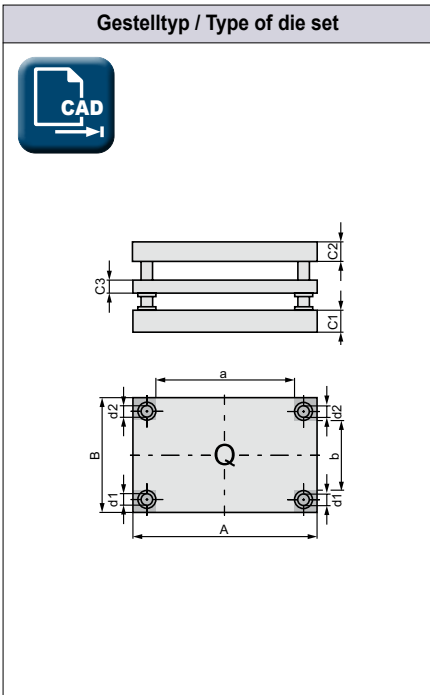
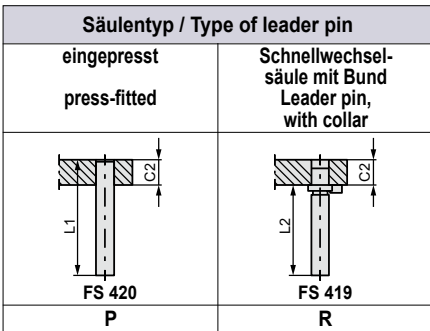
Steel die sets, 3 plates, 4 posts, type Q



SÄULENGESTELLE / DIE SETS



| | |
|---|---------------------|
| Sinterbuche Leader pin bushing, sintered | |
| C1: FS 741 | C1: FS 732 |
| C3: FS 731 | C3: FS 731 |
| 88 | 87 |
| Stahlbuche mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 641 | C1: FS 632 |
| C3: FS 631 | C3: FS 631 |
| 71 | 72 |
| Stahlbuche mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 458 + FS 425 | C1: FS 453 + FS 425 |
| C3: FS 457 + FS 425 | C3: FS 457 + FS 425 |
| 91 | 92 |

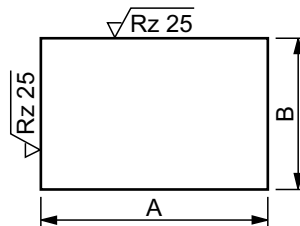


| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | | | Gewicht / Weight [kg] | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-----|-----------------------|-------|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 88 71 72 | | | 91 92 | | | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | | | | |
| 691 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 230,0 | |
| 692 | 600 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | 438 | 238 | | 422 | 222 | | 268,0 | |
| 693 | 400 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 230 | 170 | 160 | | | 400 | 600 | | 400 | 600 | | 287,0 | |
| 694 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 348,0 | |
| 695 | 600 | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | 406 | 306 | | 390 | 290 | | 395,0 | |
| 696 | 500 | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 260 | 200 | 180 | | | 500 | 600 | | 500 | 600 | | 419,0 | |
| 697 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 416,0 | |
| 698 | 600 | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | 406 | 406 | | 390 | 390 | | 473,0 | |
| 699 | 600 | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 260 | 200 | 180 | | | 600 | 600 | | 600 | 600 | | 501,0 | |
| 700 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 235,0 | |
| 701 | 700 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 33 | 40/42 | 220 | 170 | - | | | 538 | 188 | | 522 | 172 | | 274,0 | |
| 702 | 350 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 230 | 170 | 160 | | | 350 | 700 | | 350 | 700 | | 293,0 | |
| 703 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 326,0 | |
| 704 | 700 | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | 506 | 206 | | 490 | 190 | | 370,0 | |
| 705 | 400 | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 260 | 200 | 180 | | | 400 | 700 | | 400 | 700 | | 392,0 | |
| 706 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 405,0 | |
| 707 | 700 | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | 506 | 306 | | 490 | 290 | | 460,0 | |
| 708 | 500 | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 260 | 200 | 180 | | | 500 | 700 | | 500 | 700 | | 487,0 | |
| 709 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 484,0 | |
| 710 | 700 | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | 506 | 406 | | 490 | 390 | | 540,0 | |
| 711 | 600 | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 260 | 200 | 180 | | | 600 | 700 | | 600 | 700 | | 583,0 | |
| 712 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 371,0 | |
| 713 | 800 | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | 606 | 206 | | 590 | 190 | | 421,0 | |
| 714 | 400 | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 260 | 200 | 180 | | | 400 | 800 | | 400 | 800 | | 447,0 | |
| 715 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 461,0 | |
| 716 | 800 | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | 606 | 306 | | 590 | 290 | | 524,0 | |
| 717 | 500 | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 260 | 200 | 180 | | | 500 | 800 | | 500 | 800 | | 556,0 | |
| 718 | | 58 | 48 | | | 230 | 180 | - | | | | | | | | | 552,0 | |
| 719 | 800 | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 38 | 50/52 | 250 | 200 | - | | | 606 | 406 | | 590 | 390 | | 627,0 | |
| 720 | 600 | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 260 | 200 | 180 | | | 600 | 800 | | 600 | 800 | | 665,0 | |



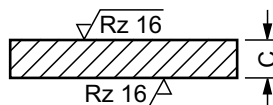
Mat.: C45

Toleranz Außenmaße /
Tolerance of length and width



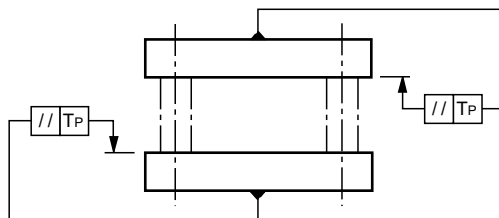
A x B +0,06
-0,06

Toleranz Plattenstärke /
Tolerance of thickness



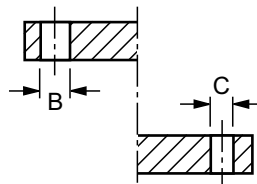
C ± 2

Parallelität der Flächenpaare /
Parallelism of two surfaces



TP = 0,012 / 100 mm

Bohrungstoleranzen /
Hole tolerances



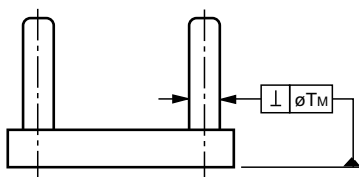
B = Aufnahmebohrung Buchse/ Mounting hole for bushing:

FS 4 .. = H6
FS 6 .. = H6

C = Aufnahmebohrung Säule/ Mounting hole for leader pin:

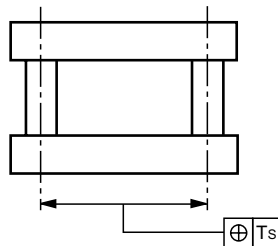
FS 320 = R7
FS 319 = JS6

Winkelgenauigkeit der Führungssäulen /
Angular accuracy of leader pins



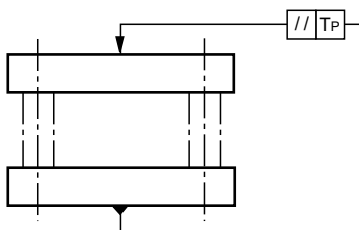
TM = 0,012 / 100 mm

Toleranz Systemabstände /
Tolerance of dimensions between leader-
pin (and bushing) - holes



Ts = ± 0,010

Planparallelität im
zusammengebauten Zustand /
Parallelism after mounting



TP = 0,015 / 100 mm

Bestellbeispiel / Order-example

| 2 C | 343 | IEP | 141 | Z |
|-------------------------------|-------------------------------|---------------------------------|-------------------------------|--|
| Gestelltyp Type of die set | Kataloggröße Catalog sizes | Säulentyp Type of leader pin | Buchsentyp Type of bushing | Position der Haltestücke Position of holding clamps |

Gestelltyp / Type of die set

Position der Haltestücke / Position of holding clamps

Pos. Z

Pos. X

Buchsentyp / Type of bushing

**Stahlbuchse, RM-beschichtet
Leader pin bushing, RM plated**

| | | |
|-----------|-----------|-----------|
| | | |
| FS 330 RM | FS 340 RM | FS 350 RM |
| 141 | 142 | 143 |

**Stahlbuchse mit Bronzeplattierung
Leader pin bushing, bronze plated**

| | | |
|--------|--------|--------|
| | | |
| FS 331 | FS 351 | FS 355 |
| 131 | 132 | 133 |

**Stahlbuchse mit Ms-Käfig
Leader pin bushing with ball cage**

| | | |
|-----------------|-----------------|-----------------|
| | | |
| FS 353 + FS 325 | FS 357 + FS 325 | FS 358 + FS 325 |
| 151 | 152 | 153 |

Säulentyp / Type of leader pin

| | |
|-----------------------------|--|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin with collar |
| | |
| FS 320 | FS 319 |
| IEP | IER |



Bestellbeispiel / Order-example

| | | | | |
|-------------------------------|-------------------------------|---------------------------------|-------------------------------|--|
| 3 C | 343 | IEP | 182 | Z |
| Gestelltyp Type of die set | Kataloggröße Catalog sizes | Säulentyp Type of leader pin | Buchsentyp Type of bushing | Position der Haltestücke Position of holding clamps |

Gestelltyp / Type of die set

Buchsentyp / Type of bushing

| | |
|---|--|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | |
| C1 = FS 340 RM C3 = FS 330 RM | C1 = FS 350 RM C3 = FS 330 RM |
| 182 | 183 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1 = FS 351 C3 = FS 331 | C1 = FS 355 C3 = FS 331 |
| 172 | 173 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | |
| C1 = FS 358 + FS 325 C3 = FS 357 + FS 325 | C1 = FS 353 + FS 325 C3 = FS 357 + FS 325 |
| 192 | 193 |

Säulentyp / Type of leader pin

| | |
|-----------------------------|--|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin with collar |
| | |
| FS 420 | FS 419 |
| IEP | IER |

Position der Haltestücke / Position of holding clamps



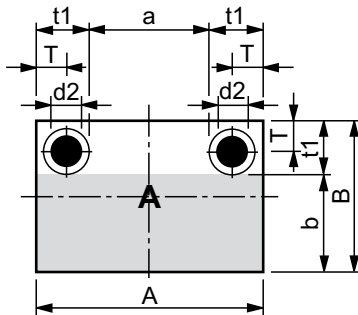
| Position Position | Platten- maße Plate length and width | Platten- stärke Plate thickness | | | Säulentyp in C1 oder C2* Type of leader pin in C1 or C2* | | Buchsentyp in C1 oder C2** Type of bushing in C1 or C2** | | Buchsentyp in C3 Type of bushing in C3 | | Haltestück- position Position of holding clamps |
|----------------------|---|--|----|----|---|-------------|---|------------|---|------------|--|
| | | A x B | C1 | C2 | C3 | FS ... | d1 x l | FS ... | d x l | FS ... | |
| Q | 610 x 494 | 78 | 48 | 38 | 320 | 40/42 x 250 | 351 | 40/42 x 67 | 331 | 40/42 x 51 | X |

* = Säulentyp in C1 oder C2 bitte angeben. / Please fill in type of leader pin in C1 or C2.

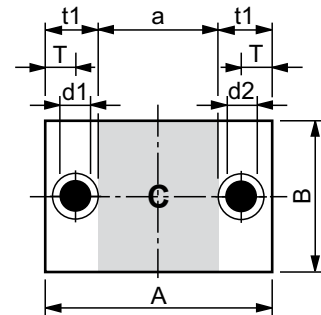
** = Buchsentyp in C1 oder C2 bitte angeben. / Please fill in type of bushing in C1 or C2.

Arbeitsflächen / Working areas

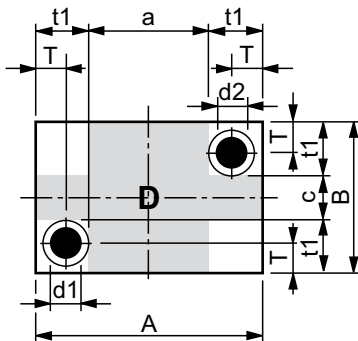
$b = B - t1$



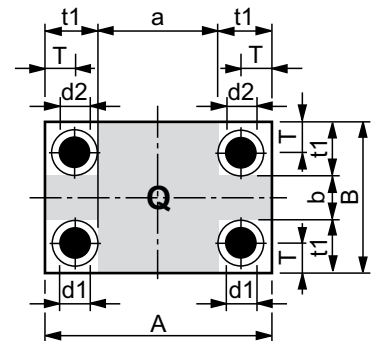
$a = A - (2 \times t1)$



$a = A - (2 \times t1)$
 $c = B - (2 \times t1)$

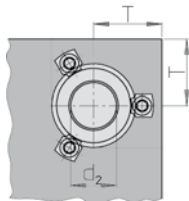


$a = A - (2 \times t1)$
 $b = B - (2 \times t1)$



Führungsbuchsen mit Bund

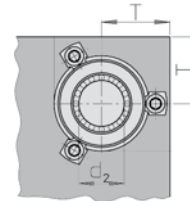
Leader pin bushings, with collar



| d_1/d_2 | T |
|-----------|------|
| 19/20 | 35 |
| 24/25 | 40 |
| 30/32 | 43,5 |
| 38/40 | 51 |
| 48/50 | 57 |
| 60/63 | 68 |
| 80 | 76 |

Führungsbuchsen mit Bund

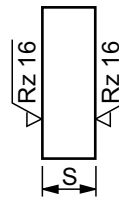
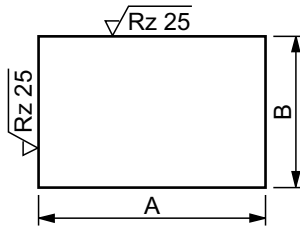
für Kugelführung
Leader pin bushings, with collar
for ball-bearings



| d_1/d_2 | T |
|-----------|------|
| 19/20 | 35 |
| 24/25 | 40 |
| 30/32 | 43,5 |
| 38/40 | 51 |
| 48/50 | 57 |
| 60/63 | 68 |
| 80 | 76 |

Mat.: C45

Toleranz Außenmaße /
Tolerance of length and width












A x B +0,06
-0,06

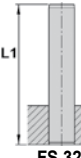
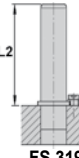
S ± 2


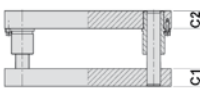
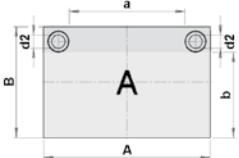
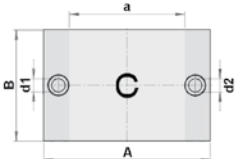
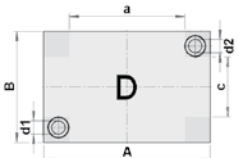
Parallelität S / Parallelism S: 0,012 / 100 mm

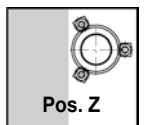
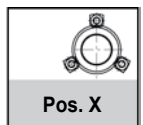
| A x B | S | | | | | | | |
|-----------|----|----|----|----|----|----|----|----|
| | 18 | 23 | 28 | 33 | 38 | 48 | 58 | 68 |
| 125 x 125 | • | • | • | | • | | | |
| 160 x 125 | • | • | • | | • | | | |
| 160 x 160 | • | • | • | | • | | | |
| 200 x 125 | • | • | • | | • | | | |
| 200 x 160 | • | • | • | • | • | • | | |
| 200 x 200 | • | • | • | • | • | • | | |
| 250 x 125 | • | • | • | • | • | • | | |
| 250 x 160 | • | • | • | • | • | • | | |
| 250 x 200 | | • | • | • | • | • | | |
| 250 x 250 | | • | • | • | • | • | | |
| 300 x 160 | | • | • | • | • | • | | |
| 300 x 200 | | • | • | • | • | • | | |
| 300 x 250 | | | • | • | • | • | | |
| 300 x 300 | | | • | • | • | • | | |
| 350 x 200 | | • | • | • | • | • | | |
| 350 x 250 | | | • | • | • | • | | |
| 350 x 300 | | | • | • | • | • | • | |
| 350 x 350 | | | • | • | • | • | • | |
| 400 x 200 | | • | • | • | • | • | | |
| 400 x 250 | | | • | • | • | • | | |
| 400 x 300 | | | | • | • | • | • | |
| 400 x 350 | | | | • | • | • | • | |
| 400 x 400 | | | | • | • | • | • | |
| 500 x 250 | | | • | • | • | • | | |
| 500 x 300 | | | | • | • | • | • | |
| 500 x 350 | | | | • | • | • | • | |
| 500 x 400 | | | | • | • | • | • | |
| 500 x 500 | | | | • | • | • | • | • |
| 600 x 300 | | | | • | • | • | • | • |
| 600 x 350 | | | | • | • | • | • | • |
| 600 x 400 | | | | • | • | • | • | • |
| 600 x 500 | | | | | • | • | • | • |
| 600 x 600 | | | | | • | • | • | • |
| 700 x 350 | | | | • | • | • | • | • |
| 700 x 400 | | | | | • | • | • | • |
| 700 x 500 | | | | | • | • | • | • |
| 700 x 600 | | | | | • | • | • | • |
| 800 x 400 | | | | | • | • | • | • |
| 800 x 500 | | | | | • | • | • | • |
| 800 x 600 | | | | | • | • | • | • |



| Buchsentyp / Type of bushing | | |
|---|---|---|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | | |
|  |  |  |
| FS 330 RM | FS 340 RM | FS 350 RM |
| 141 | 142 | 143 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
|  |  |  |
| FS 331 | FS 351 | FS 355 |
| 131 | 132 | 133 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
|  |  |  |
| FS 353 + FS 325 | FS 357 + FS 325 | FS 358 + FS 325 |
| 151 | 152 | 153 |

| Säulentyp / Type of leader pin | |
|---|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
|  |  |
| FS 320 | FS 319 |
| IEP | IER |

| Gestelltyp / Type of die set | |
|---|---|
|  |  |
|  |  |
|  | |

| Position der Haltestücke / Position of holding clamps | |
|---|---|
|  |  |
| Pos. Z | Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|----|-------------------------------|-------------|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------------|---------------|---------------|---------------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 141 131 | | | 142 132 | | | 143 133 | | | | 151 X B | 152 X A | 153 X A |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | | | | | | | |
| 301 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | 7,0 | | |
| 302 | 125 X 125 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 15 X 120 | 70 X 125 | 15 X 125 | | 70 X 125 | | | 7,7 | | |
| 303 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | 8,9 | | |
| 304 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | 8,8 | | |
| 305 | 160 X 125 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 50 X 125 | 70 X 160 | 15 X 160 | 50 X 125 | 70 X 160 | | | 9,6 | | |
| 306 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | 11,2 | | |
| 307 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | 11,0 | | |
| 308 | 160 X 160 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 50 X 160 | 105 X 160 | 50 X 160 | 50 X 160 | 105 X 160 | 50 X 160 | | 12,0 | | |
| 309 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | 14,0 | | |
| 310 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | 10,8 | | |
| 311 | 200 X 125 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 90 X 125 | 70 X 200 | 15 X 200 | 90 X 125 | 70 X 200 | | | 11,8 | | |
| 312 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | 13,7 | | |
| 313 | | 33 | 28 | - | | 140 | 112 | - | | | | | | | | | | | 16,4 | | |
| 314 | 200 X 160 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 72 X 160 | 96 X 200 | 32 X 200 | 70 X 160 | 95 X 200 | 32 X 200 | | 17,6 | | |
| 315 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | 22,6 | | |
| 316 | | 33 | 28 | - | | 140 | 112 | - | | | | | | | | | | | 20,2 | | |
| 317 | 200 X 200 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 72 X 200 | 136 X 200 | 72 X 200 | 72 X 200 | 136 X 200 | 72 X 200 | | 21,8 | | |
| 318 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | 28,0 | | |
| 319 | | 33 | 28 | - | | 140 | 112 | - | | | | | | | | | | | 16,0 | | |
| 320 | 250 X 125 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 122 X 125 | 61 X 250 | | 122 X 125 | 61 X 250 | | | 17,3 | | |
| 321 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | 22,1 | | |
| 322 | | 33 | 28 | - | | 140 | 112 | - | | | | | | | | | | | 20,2 | | |
| 323 | 250 X 160 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 122 X 160 | 96 X 250 | 32 X 250 | 122 X 160 | 96 X 250 | 32 X 250 | | 21,8 | | |
| 324 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | 28,0 | | |
| 325 | | 33 | 28 | - | | 140 | 112 | - | | | | | | | | | | | 25,0 | | |
| 326 | 250 X 200 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 122 X 200 | 136 X 250 | 72 X 250 | 122 X 200 | 136 X 250 | 72 X 250 | | 27,0 | | |
| 327 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | 34,8 | | |
| 328 | | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | 36,4 | | |
| 329 | 250 X 250 | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 106 X 250 | 178 X 250 | 106 X 250 | 106 X 250 | 178 X 250 | 106 X 250 | | 38,8 | | |
| 330 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | 43,7 | | |










| Buchsentyp / Type of bushing | | |
|--|-----------------|-----------------|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | | |
| | | |
| FS 330 RM | FS 340 RM | FS 350 RM |
| 141 | 142 | 143 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 331 | FS 351 | FS 355 |
| 131 | 132 | 133 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 353 + FS 325 | FS 357 + FS 325 | FS 358 + FS 325 |
| 151 | 152 | 153 |

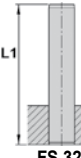
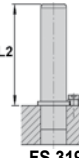
| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 320 | FS 319 |
| IEP | IER |


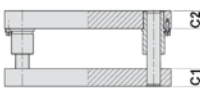
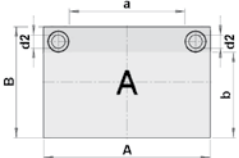
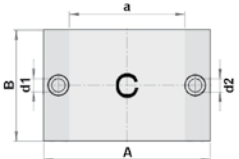
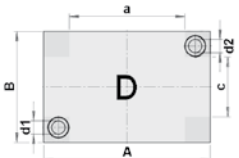
| Gestelltyp / Type of die set | |
|------------------------------|--|
| | |
| | |
| | |

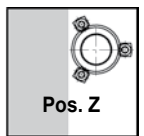
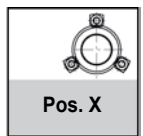
| Position der Haltestücke / Position of holding clamps | |
|---|--------|
| | |
| Pos. Z | Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-------------------------------|----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------------|-------------|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 141 131 | | | 142 132 | | | 143 133 | | | 151 152 153 | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | | b X A | | c X A | |
| 331 | | 33 | 28 | - | | 140 | 112 | - | | | | | | | | | | | | 24,0 |
| 332 | 300 | 33 | 33 | - | 24/25 | 160 | 126 | - | | | | 172 | 96 | 32 | 172 | 96 | 32 | | | 25,9 |
| | X | 33 | 33 | - | | | | | | | | X | X | X | X | X | X | | | |
| | 160 | | | | | | | | | | | 160 | 300 | 300 | 160 | 300 | 300 | | | 33,4 |
| 333 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | |
| 334 | 300 | 33 | 28 | - | | 140 | 112 | - | | | | | | | | | | | | 29,8 |
| 335 | X | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 172 | 136 | 72 | 172 | 136 | 72 | | | 32,1 |
| | 200 | | | | | | | | | | | X | X | X | X | X | X | | | |
| 336 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 41,5 |
| 337 | 300 | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | 43,3 |
| 338 | X | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 156 | 178 | 106 | 156 | 178 | 106 | | | 46,3 |
| | 250 | | | | | | | | | | | X | X | X | X | X | X | | | |
| 339 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 52,5 |
| 340 | 300 | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | 52,0 |
| 341 | X | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 156 | 228 | 156 | 156 | 228 | 156 | | | 55,5 |
| | 300 | | | | | | | | | | | X | X | X | X | X | X | | | |
| 342 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 62,5 |
| 343 | 350 | 33 | 28 | - | | 140 | 112 | - | | | | | | | | | | | | 34,6 |
| 344 | X | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 222 | 136 | 72 | 222 | 136 | 72 | | | 37,3 |
| | 200 | | | | | | | | | | | X | X | X | X | X | X | | | |
| 345 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 48,3 |
| 346 | 350 | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | 50,5 |
| 347 | X | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 206 | 178 | 106 | 206 | 178 | 106 | | | 54,0 |
| | 250 | | | | | | | | | | | X | X | X | X | X | X | | | |
| 348 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 61,0 |
| 349 | 350 | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 74,0 |
| 350 | X | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 182 | 216 | 132 | 182 | 216 | 132 | | | 82,5 |
| | 300 | | | | | | | | | | | X | X | X | X | X | X | | | |
| 351 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | 90,5 |
| 352 | 350 | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 86,0 |
| 353 | X | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 182 | 266 | 182 | 182 | 266 | 182 | | | 95,5 |
| | 350 | | | | | | | | | | | X | X | X | X | X | X | | | |
| 354 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | 105,0 |
| 355 | 400 | 33 | 28 | - | | 140 | 112 | - | | | | | | | | | | | | 39,4 |
| 356 | X | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 272 | 136 | 72 | 272 | 136 | 72 | | | 42,5 |
| | 200 | | | | | | | | | | | X | X | X | X | X | X | | | |
| 357 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 55,0 |
| 358 | 400 | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | 57,5 |
| 359 | X | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 256 | 178 | 106 | 256 | 178 | 106 | | | 61,5 |
| | 250 | | | | | | | | | | | X | X | X | X | X | X | | | |
| 360 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 69,0 |

| Buchsentyp / Type of bushing | | |
|---|---|---|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | | |
|  |  |  |
| FS 330 RM | FS 340 RM | FS 350 RM |
| 141 | 142 | 143 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
|  |  |  |
| FS 331 | FS 351 | FS 355 |
| 131 | 132 | 133 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
|  |  |  |
| FS 353 + FS 325 | FS 357 + FS 325 | FS 358 + FS 325 |
| 151 | 152 | 153 |

| Säulentyp / Type of leader pin | |
|---|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
|  |  |
| FS 320 | FS 319 |
| IEP | IER |

| Gestelltyp / Type of die set | |
|---|---|
|  |  |
|  |  |
|  | |

| Position der Haltestücke / Position of holding clamps | |
|---|---|
|  |  |
| Pos. Z | Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------------|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 141 131 | | | 142 132 | | | 143 133 | | | | 151 152 153 | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | c X A | | | |
| 361 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 84,0 |
| 362 | 400 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 232 | 216 | 132 | 232 | 216 | 132 | | | 93,5 |
| | X | | | | | | | | | | | X | X | X | X | X | X | | | |
| | 300 | | | | | | | | | | | 300 | 400 | 400 | 300 | 400 | 400 | | | 103,0 |
| 363 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 364 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 97,5 |
| 365 | 400 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 232 | 266 | 182 | 232 | 266 | 182 | | | 109,0 |
| | X | | | | | | | | | | | X | X | X | X | X | X | | | |
| | 350 | | | | | | | | | | | 350 | 400 | 400 | 350 | 400 | 400 | | | 120,0 |
| 366 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 367 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 111,0 |
| 368 | 400 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 232 | 316 | 232 | 232 | 316 | 232 | | | 124,0 |
| | X | | | | | | | | | | | X | X | X | X | X | X | | | |
| | 400 | | | | | | | | | | | 400 | 400 | 400 | 400 | 400 | 400 | | | 137,0 |
| 369 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 370 | | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | 73,0 |
| 371 | 500 | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 356 | 178 | 106 | 356 | 178 | 106 | | | 78,0 |
| | X | | | | | | | | | | | X | X | X | X | X | X | | | |
| | 250 | | | | | | | | | | | 250 | 500 | 500 | 250 | 500 | 500 | | | 87,5 |
| 372 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | |
| 373 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 105,0 |
| 374 | 500 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 332 | 216 | 132 | 332 | 216 | 132 | | | 116,0 |
| | X | | | | | | | | | | | X | X | X | X | X | X | | | |
| | 300 | | | | | | | | | | | 300 | 500 | 500 | 300 | 500 | 500 | | | 128,0 |
| 375 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 376 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 122,0 |
| 377 | 500 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 332 | 266 | 182 | 332 | 266 | 182 | | | 135,0 |
| | X | | | | | | | | | | | X | X | X | X | X | X | | | |
| | 350 | | | | | | | | | | | 350 | 500 | 500 | 350 | 500 | 500 | | | 149,0 |
| 378 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 379 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 138,0 |
| 380 | 500 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 332 | 316 | 232 | 332 | 316 | 232 | | | 154,0 |
| | X | | | | | | | | | | | X | X | X | X | X | X | | | |
| | 400 | | | | | | | | | | | 400 | 500 | 500 | 400 | 500 | 500 | | | 170,0 |
| 381 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 382 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | 213,0 |
| 383 | 500 | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | 306 | 403 | 306 | 306 | 403 | 306 | | | 233,0 |
| | X | | | | | | | | | | | X | X | X | X | X | X | | | |
| | 500 | | | | | | | | | | | 500 | 500 | 500 | 500 | 500 | 500 | | | 252,0 |
| 384 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | |
| 385 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | 155,0 |
| 386 | 600 | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | 406 | 203 | 106 | 406 | 203 | 106 | | | 169,0 |
| | X | | | | | | | | | | | X | X | X | X | X | X | | | |
| | 300 | | | | | | | | | | | 300 | 600 | 600 | 300 | 600 | 600 | | | 183,0 |
| 387 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | |
| 388 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | 180,0 |
| 389 | 600 | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | 406 | 253 | 156 | 406 | 253 | 156 | | | 196,0 |
| | X | | | | | | | | | | | X | X | X | X | X | X | | | |
| | 350 | | | | | | | | | | | 350 | 600 | 600 | 350 | 600 | 600 | | | 213,0 |
| 390 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | |

SÄULENGESTELLE / DIE SETS

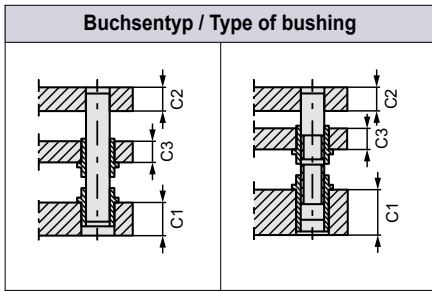
| Buchsentyp / Type of bushing | | |
|--|-----------------|-----------------|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | | |
| | | |
| FS 330 RM | FS 340 RM | FS 350 RM |
| 141 | 142 | 143 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 331 | FS 351 | FS 355 |
| 131 | 132 | 133 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 353 + FS 325 | FS 357 + FS 325 | FS 358 + FS 325 |
| 151 | 152 | 153 |

| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 320 | FS 319 |
| IEP | IER |

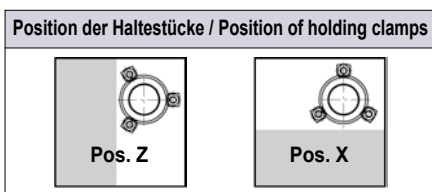
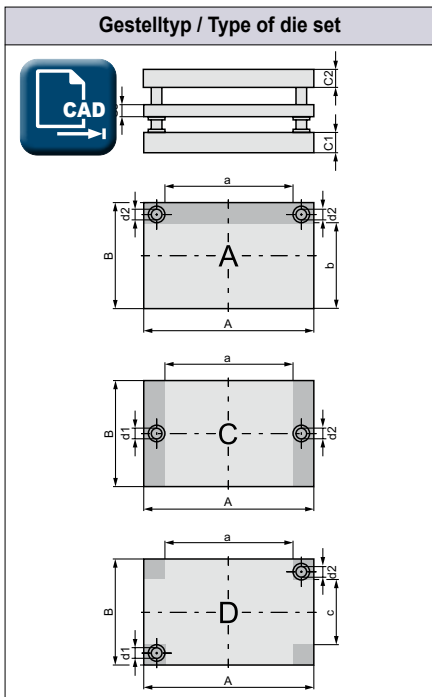
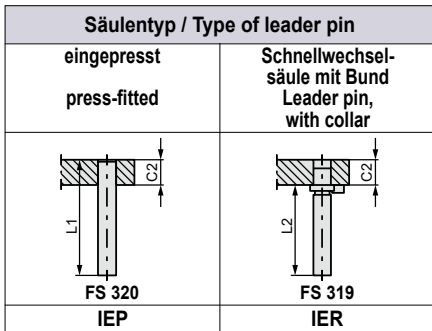
| Gestelltyp / Type of die set | |
|------------------------------|--|
| | |
| | |
| | |

| Position der Haltestücke / Position of holding clamps | |
|---|--------|
| | |
| Pos. Z | Pos. X |

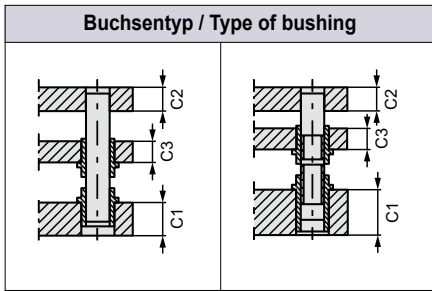
| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------------|-------------|--|--|--|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 141 131 | | | 142 132 | | | 143 133 | | | 151 152 153 | | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | | | c X A | | | | |
| 391 | | 58 | 48 | - | | 224 | 180 | - | | | | | | | | | | | | | | | 205,0 |
| 392 | 600 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 224,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | |
| | 400 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 242,0 |
| 393 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 394 | 600 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 254,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 278,0 |
| | 500 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 302,0 |
| 395 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 396 | 600 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 305,0 |
| | X | 58 | 58 | - | | 234 | 180 | - | | | | | | | | | | | | | | | 333,0 |
| | 600 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 361,0 |
| 397 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 398 | 700 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 209,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 228,0 |
| | 350 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 247,0 |
| 399 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 400 | 700 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 238,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 260,0 |
| | 400 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 282,0 |
| 401 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 402 | 700 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 296,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 324,0 |
| | 400 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 351,0 |
| 403 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 404 | 700 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 354,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 388,0 |
| | 400 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 420,0 |
| 405 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 406 | 700 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 271,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 296,0 |
| | 500 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 321,0 |
| 407 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 408 | 700 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 338,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 369,0 |
| | 600 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 400,0 |
| 409 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 410 | 800 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 404,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 442,0 |
| | 400 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 480,0 |
| 411 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 412 | 800 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 404,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 442,0 |
| | 400 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 480,0 |
| 413 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 414 | 800 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 404,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 442,0 |
| | 500 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 480,0 |
| 415 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 416 | 800 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 404,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 442,0 |
| | 500 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 480,0 |
| 417 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 418 | 800 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 404,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 442,0 |
| | 600 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 480,0 |
| 419 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | |
| 420 | 800 | 58 | 48 | - | 48/50 | 224 | 180 | - | | | | | | | | | | | | | | | 404,0 |
| | X | 58 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 442,0 |
| | 600 | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | 480,0 |



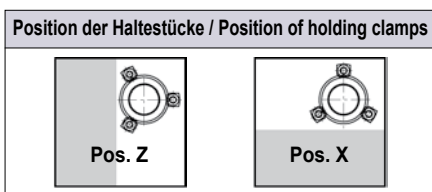
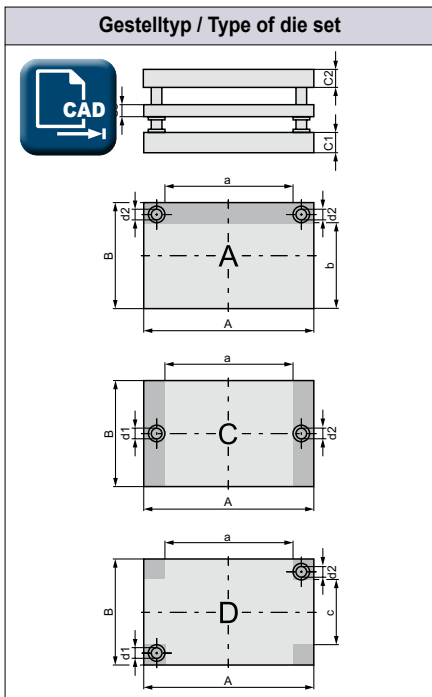
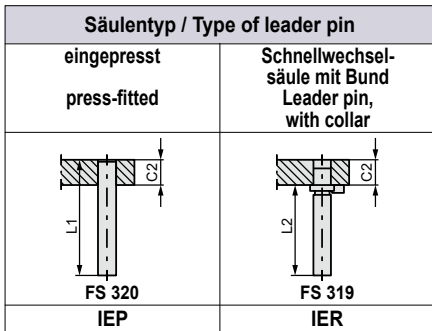
| | |
|---|---------------------|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | |
| C1: FS 340 RM | C1: FS 350 RM |
| C3: FS 330 RM | C3: FS 330 RM |
| 182 | 183 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 351 | C1: FS 355 |
| C3: FS 331 | C3: FS 331 |
| 172 | 173 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 358 + FS 325 | C1: FS 353 + FS 325 |
| C3: FS 357 + FS 325 | C3: FS 357 + FS 325 |
| 192 | 193 |



| Größe / Size | Abmessungen / Dimensions | | | | | | | | Arbeitsflächen / Working area | | | | | | Gewicht / Weight [kg] | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|------|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 182 172 | | | 183 173 | | | | 192 193 | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | | a X B | b X A | c X A | | |
| 301 | | 28 | 23 | | | 140 | 125 | - | | | | | | | | | | | 9,4 | |
| 302 | 125 | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | | 15 | 70 | 15 | 15 | 70 | 15 | | 11,2 | |
| 303 | 125 | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 38 | | | 180 | 140 | - | | | | 125 | 125 | 125 | 125 | 125 | 125 | | 12,4 | |
| 304 | | 28 | 23 | | | 140 | 125 | - | | | | | | | | | | | 11,7 | |
| 305 | 160 | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | | 50 | 70 | 15 | 50 | 70 | 15 | | 14,2 | |
| 306 | 125 | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 38 | | | 180 | 140 | - | | | | 125 | 160 | 160 | 125 | 160 | 160 | | 15,8 | |
| 307 | | 28 | 23 | | | 140 | 125 | - | | | | | | | | | | | 14,8 | |
| 308 | 160 | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | | 50 | 105 | 50 | 50 | 105 | 50 | | 17,8 | |
| 309 | 160 | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 38 | | | 180 | 140 | - | | | | 160 | 160 | 160 | 160 | 160 | 160 | | 19,8 | |
| 310 | | 28 | 23 | | | 140 | 125 | - | | | | | | | | | | | 14,4 | |
| 311 | 200 | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | | 90 | 70 | 15 | 90 | 70 | 15 | | 17,4 | |
| 312 | 125 | | | | | | | | | | | | | | | | | | | |
| | X | 38 | 38 | | | 180 | 140 | - | | | | 125 | 200 | 200 | 125 | 200 | 200 | | 19,4 | |
| 313 | | 33 | 28 | | | 160 | 125 | - | | | | | | | | | | | 22,3 | |
| 314 | 200 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 180 | 160 | - | | | | 72 | 96 | 32 | 72 | 96 | 32 | | 28,4 | |
| 315 | 160 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 160 | - | | | | 160 | 200 | 200 | 160 | 200 | 200 | | 30,9 | |
| 316 | | 33 | 28 | | | 160 | 125 | - | | | | | | | | | | | 27,5 | |
| 317 | 200 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 180 | 160 | - | | | | 72 | 136 | 72 | 72 | 136 | 72 | | 35,2 | |
| 318 | 200 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 160 | - | | | | 200 | 200 | 200 | 200 | 200 | 200 | | 38,4 | |
| 319 | | 33 | 28 | | | 160 | 125 | - | | | | | | | | | | | 21,8 | |
| 320 | 250 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 180 | 160 | - | | | | 122 | 61 | | 122 | 61 | | | 27,8 | |
| 321 | 125 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 160 | - | | | | 125 | 250 | | 125 | 250 | | | 30,2 | |
| 322 | | 33 | 28 | | | 160 | 125 | - | | | | | | | | | | | 27,5 | |
| 323 | 250 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 180 | 160 | - | | | | 122 | 96 | 32 | 122 | 96 | 32 | | 35,2 | |
| 324 | 160 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 160 | - | | | | 160 | 250 | 250 | 160 | 250 | 250 | | 38,4 | |
| 325 | | 33 | 28 | | | 160 | 125 | - | | | | | | | | | | | 34,2 | |
| 326 | 250 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 23 | 24/25 | 180 | 160 | - | | | | 122 | 136 | 72 | 122 | 136 | 72 | | 43,8 | |
| 327 | 200 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 160 | - | | | | 200 | 250 | 250 | 200 | 250 | 250 | | 47,7 | |
| 328 | | 38 | 33 | | | 180 | 125 | - | | | | | | | | | | | 50,5 | |
| 329 | 250 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 33 | 30/32 | 200 | 160 | - | | | | 106 | 178 | 106 | 106 | 178 | 106 | | 57,5 | |
| 330 | 250 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 160 | - | | | | 250 | 250 | 250 | 250 | 250 | 250 | | 62,5 | |

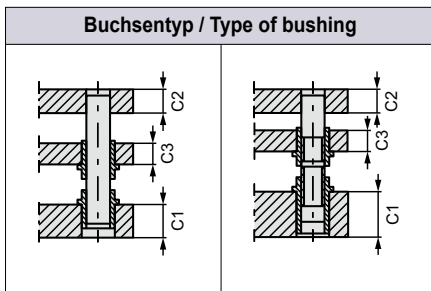


| | |
|---|---------------------|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | |
| C1: FS 340 RM | C1: FS 350 RM |
| C3: FS 330 RM | C3: FS 330 RM |
| 182 | 183 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 351 | C1: FS 355 |
| C3: FS 331 | C3: FS 331 |
| 172 | 173 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 358 + FS 325 | C1: FS 353 + FS 325 |
| C3: FS 357 + FS 325 | C3: FS 357 + FS 325 |
| 192 | 193 |

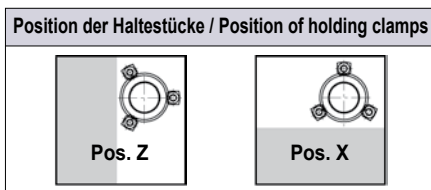
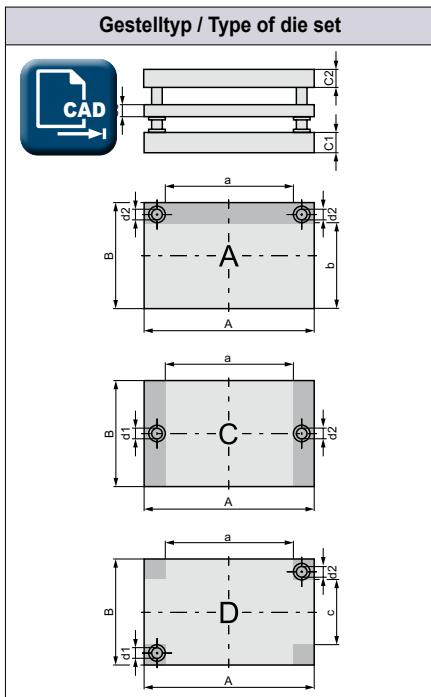
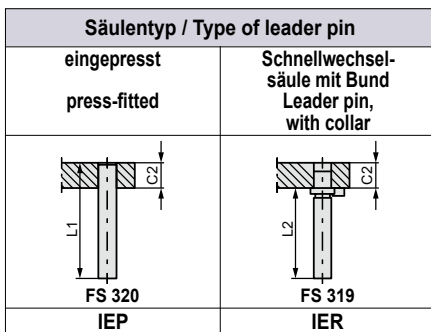


| Größe / Size | Abmessungen / Dimensions | | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 182 172 | | | 183 173 | | | 192 193 | | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | c X A | | | |
| 361 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | 115,0 | |
| 362 | 400 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | | 232 | 216 | 132 | 232 | 216 | 132 | | 134,0 | |
| 363 | 300 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | | 300 | 400 | 400 | 300 | 400 | 400 | | 144,0 | |
| 364 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | 134,0 | |
| 365 | 400 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | | 232 | 266 | 182 | 232 | 266 | 182 | | 156,0 | |
| 366 | 350 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | | 350 | 400 | 400 | 350 | 400 | 400 | | 167,0 | |
| 367 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | 153,0 | |
| 368 | 400 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | | 232 | 316 | 232 | 232 | 316 | 232 | | 178,0 | |
| 369 | 400 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | | 400 | 400 | 400 | 400 | 400 | 400 | | 190,0 | |
| 370 | | 38 | 33 | | | 180 | 140 | - | | | | | | | | | | | 99,0 | |
| 371 | 500 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 33 | 30/32 | 200 | 160 | - | | | | 356 | 178 | 106 | 356 | 178 | 106 | | 114,0 | |
| 372 | 250 | | | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 160 | - | | | | 250 | 500 | 500 | 250 | 500 | 500 | | 124,0 | |
| 373 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | 143,0 | |
| 374 | 500 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | | 332 | 216 | 132 | 332 | 216 | 132 | | 167,0 | |
| 375 | 300 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | | 300 | 500 | 500 | 300 | 500 | 500 | | 179,0 | |
| 376 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | 167,0 | |
| 377 | 500 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | | 332 | 266 | 182 | 332 | 266 | 182 | | 194,0 | |
| 378 | 350 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | | 350 | 500 | 500 | 350 | 500 | 500 | | 208,0 | |
| 379 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | 190,0 | |
| 380 | 500 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | | 332 | 316 | 232 | 332 | 316 | 232 | | 222,0 | |
| 381 | 400 | | | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | | 400 | 500 | 500 | 400 | 500 | 500 | | 237,0 | |
| 382 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | 287,0 | |
| 383 | 500 | | | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 306 | 403 | 306 | 306 | 403 | 306 | | 327,0 | |
| 384 | 500 | | | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 280 | 200 | - | | | | 500 | 500 | 500 | 500 | 500 | 500 | | 346,0 | |
| 385 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | 208,0 | |
| 386 | 600 | | | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 406 | 203 | 106 | 406 | 203 | 106 | | 237,0 | |
| 387 | 300 | | | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 280 | 200 | - | | | | 300 | 600 | 600 | 300 | 600 | 600 | | 251,0 | |
| 388 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | 242,0 | |
| 389 | 600 | | | | | | | | | | | | | | | | | | | |
| | X | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 406 | 253 | 156 | 406 | 253 | 156 | | 275,0 | |
| 390 | 350 | | | | | | | | | | | | | | | | | | | |
| | X | 68 | 68 | | | 280 | 200 | - | | | | 350 | 600 | 600 | 350 | 600 | 600 | | 292,0 | |










SÄULENGESTELLE / DIE SETS

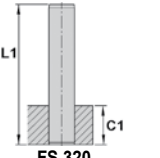
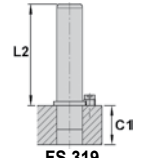



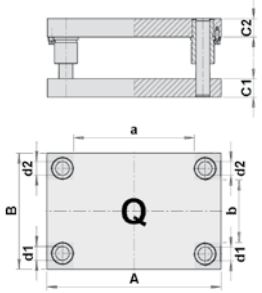
| | |
|--|--|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | |
| C1: FS 340 RM C3: FS 330 RM | C1: FS 350 RM C3: FS 330 RM |
| 182 | 183 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 351 C3: FS 331 | C1: FS 355 C3: FS 331 |
| 172 | 173 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 358 + FS 325 C3: FS 357 + FS 325 | C1: FS 353 + FS 325 C3: FS 357 + FS 325 |
| 192 | 193 |

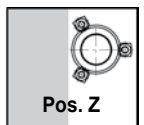
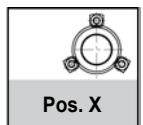


| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | Gewicht / Weight [kg] | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-----------------------|------------|-------------|-----|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 182 172 | | | 183 173 | | | 192 193 | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | | | c X A | | |
| 391 | | 58 | 48 | | | 224 | 180 | - | | | | 406 | 303 | 206 | 406 | 303 | 206 | 276,0 |
| 392 | 600 X 400 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 406 | 303 | 206 | 406 | 303 | 206 | 314,0 |
| 393 | | 68 | 68 | | | 280 | 200 | - | | | | 400 | 600 | 600 | 400 | 600 | 600 | 333,0 |
| 394 | | 58 | 48 | | | 224 | 180 | - | | | | 406 | 403 | 306 | 406 | 403 | 306 | 344,0 |
| 395 | 600 X 500 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 406 | 303 | 206 | 406 | 303 | 206 | 391,0 |
| 396 | | 68 | 68 | | | 280 | 200 | - | | | | 500 | 600 | 600 | 500 | 600 | 600 | 415,0 |
| 397 | | 58 | 48 | | | 224 | 180 | - | | | | 406 | 503 | 406 | 406 | 503 | 406 | 412,0 |
| 398 | 600 X 600 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 406 | 303 | 206 | 406 | 303 | 206 | 468,0 |
| 399 | | 68 | 68 | | | 280 | 200 | - | | | | 600 | 600 | 600 | 600 | 600 | 600 | 497,0 |
| 400 | | 58 | 48 | | | 224 | 180 | - | | | | 506 | 253 | 156 | 506 | 253 | 156 | 282,0 |
| 401 | 700 X 350 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 350 | 700 | 700 | 350 | 700 | 700 | 320,0 |
| 402 | | 68 | 68 | | | 280 | 200 | - | | | | 700 | 700 | 700 | 700 | 700 | 700 | 340,0 |
| 403 | | 58 | 48 | | | 224 | 180 | - | | | | 506 | 303 | 206 | 506 | 303 | 206 | 321,0 |
| 404 | 700 X 400 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 400 | 700 | 700 | 400 | 700 | 700 | 365,0 |
| 405 | | 68 | 68 | | | 280 | 200 | - | | | | 700 | 700 | 700 | 700 | 700 | 700 | 387,0 |
| 406 | | 58 | 48 | | | 224 | 180 | - | | | | 506 | 403 | 306 | 506 | 403 | 306 | 400,0 |
| 407 | 700 X 500 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 500 | 700 | 700 | 500 | 700 | 700 | 455,0 |
| 408 | | 68 | 68 | | | 280 | 200 | - | | | | 700 | 700 | 700 | 700 | 700 | 700 | 483,0 |
| 409 | | 58 | 48 | | | 224 | 180 | - | | | | 506 | 503 | 406 | 506 | 503 | 406 | 480,0 |
| 410 | 700 X 600 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 600 | 700 | 700 | 600 | 700 | 700 | 545,0 |
| 411 | | 68 | 68 | | | 280 | 200 | - | | | | 700 | 700 | 700 | 700 | 700 | 700 | 579,0 |
| 412 | | 58 | 48 | | | 224 | 180 | - | | | | 606 | 303 | 206 | 606 | 303 | 206 | 366,0 |
| 413 | 800 X 400 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 400 | 800 | 800 | 400 | 800 | 800 | 417,0 |
| 414 | | 68 | 68 | | | 280 | 200 | - | | | | 800 | 800 | 800 | 800 | 800 | 800 | 442,0 |
| 415 | | 58 | 48 | | | 224 | 180 | - | | | | 606 | 403 | 306 | 606 | 403 | 306 | 457,0 |
| 416 | 800 X 500 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 500 | 800 | 800 | 500 | 800 | 800 | 520,0 |
| 417 | | 68 | 68 | | | 280 | 200 | - | | | | 800 | 800 | 800 | 800 | 800 | 800 | 551,0 |
| 418 | | 58 | 48 | | | 224 | 180 | - | | | | 606 | 503 | 406 | 606 | 503 | 406 | 547,0 |
| 419 | 800 X 600 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 600 | 800 | 800 | 600 | 800 | 800 | 623,0 |
| 420 | | 68 | 68 | | | 280 | 200 | - | | | | 800 | 800 | 800 | 800 | 800 | 800 | 661,0 |

| Buchsentyp / Type of bushing | | |
|---|---|---|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | | |
|  |  |  |
| FS 330 RM | FS 340 RM | FS 350 RM |
| 141 | 142 | 143 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
|  |  |  |
| FS 331 | FS 351 | FS 355 |
| 131 | 132 | 133 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
|  |  |  |
| FS 353 + FS 325 | FS 357 + FS 325 | FS 358 + FS 325 |
| 151 | 152 | 153 |

| Säulentyp / Type of leader pin | |
|---|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
|  |  |
| FS 320 IEP | FS 319 IER |

| Gestelltyp / Type of die set |
|---|
|  |
|  |

| Position der Haltestücke / Position of holding clamps | |
|---|---|
|  |  |
| Pos. Z | Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|----|-------------------------------|-------------|-------------|-----------------|-----------------|-------------|-------------|-----------------|-----------------|-----------------------|-------------------|--|--|--|------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 141 131 | | | 142 132 | | | 143 133 | | | | 151 152 153 | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | c X A | | | | | | |
| 301 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | | | | | 7,8 |
| 302 | 125 X 125 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 15 X 125 | 15 X 125 | | | | | | | | | | 8,4 |
| 303 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 9,7 |
| 304 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | | | | | 9,5 |
| 305 | 160 X 125 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 50 X 125 | 15 X 160 | | | 50 X 125 | | | | | | | 10,4 |
| 306 | | 38 | 28 | - | | 150 | 112 | - | | | | | | | | | | | | | | | 11,9 |
| 307 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | | | | | 11,9 |
| 308 | 160 X 160 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 50 X 160 | 50 X 160 | | | 50 X 160 | 50 X 160 | | | | | | 12,8 |
| 309 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 14,8 |
| 310 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | | | | | 11,5 |
| 311 | 200 X 125 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 90 X 125 | 15 X 200 | | | 90 X 125 | | | | | | | 12,5 |
| 312 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 14,5 |
| 313 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | | | | | 14,3 |
| 314 | 200 X 160 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 90 X 160 | 50 X 200 | | | 90 X 160 | 50 X 200 | | | | | | 15,6 |
| 315 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 18,1 |
| 316 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | | | | | 17,5 |
| 317 | 200 X 200 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 90 X 200 | 90 X 200 | | | 90 X 200 | 90 X 200 | | | | | | 19,1 |
| 318 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 22,3 |
| 319 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | | | | | 14,0 |
| 320 | 250 X 125 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 140 X 125 | 15 X 250 | | | 140 X 125 | | | | | | | 15,3 |
| 321 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 17,7 |
| 322 | | 28 | 23 | - | | 125 | 100 | - | | | | | | | | | | | | | | | 17,5 |
| 323 | 250 X 160 | 28 | 28 | - | 19/20 | 140 | 112 | - | | | | 140 X 160 | 50 X 250 | | | 140 X 160 | 50 X 250 | | | | | | 19,1 |
| 324 | | 38 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 22,3 |
| 325 | | 33 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 26,0 |
| 326 | 250 X 200 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 122 X 200 | 72 X 250 | | | 122 X 200 | 70 X 250 | | | | | | 27,9 |
| 327 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | 35,8 |
| 328 | | 33 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 32,0 |
| 329 | 250 X 250 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 122 X 250 | 122 X 250 | | | 122 X 250 | 120 X 250 | | | | | | 34,4 |
| 330 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | 44,2 |

SÄULENGESTELLE / DIE SETS










| Buchsentyp / Type of bushing | | |
|--|-----------------|-----------------|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | | |
| | | |
| FS 330 RM | FS 340 RM | FS 350 RM |
| 141 | 142 | 143 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 331 | FS 351 | FS 355 |
| 131 | 132 | 133 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 353 + FS 325 | FS 357 + FS 325 | FS 358 + FS 325 |
| 151 | 152 | 153 |

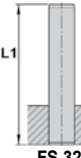
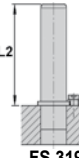
| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 320 | FS 319 |
| IEP | IER |


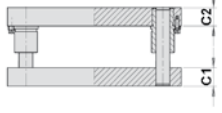
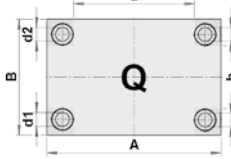
| Gestelltyp / Type of die set |
|------------------------------|
| |
| |

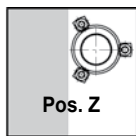
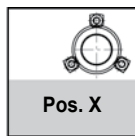
| Position der Haltestücke / Position of holding clamps |
|---|
| |
| |
| Pos. Z |
| Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-------------------------------|----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|-------------|-------------|--|------|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 141 131 | | | 142 132 | | | 143 133 | | | 151 152 | | | 153 | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | | b X A | c X A | a X B | b X A | c X A | | | |
| 331 | | 33 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 25,0 | |
| 332 | 300 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 172 | 32 | | | | | 172 | 32 | | | | 26,9 | |
| | X | 33 | 33 | - | | | | | | | | X | X | | | | X | X | | | | | | |
| | 160 | 48 | 38 | - | | | | | | | | 160 | 300 | | | | 160 | 300 | | | | | 34,4 | |
| 333 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | | |
| 334 | | 33 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 30,8 | |
| 335 | 300 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 172 | 72 | | | | 172 | 72 | | | | | 33,1 | |
| | X | 33 | 33 | - | | | | | | | | X | X | | | | X | X | | | | | | |
| | 200 | 48 | 38 | - | | | | | | | | 200 | 300 | | | | 200 | 300 | | | | | 42,5 | |
| 336 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | | |
| 337 | | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | | | | 44,8 | |
| 338 | 300 | 38 | 33 | - | | | | | | | | 156 | 106 | | | | 156 | 106 | | | | | | |
| | X | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | X | X | | | | X | X | | | | | 47,8 | |
| | 250 | 48 | 38 | - | | | | | | | | 250 | 300 | | | | 250 | 300 | | | | | 54,0 | |
| 339 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | | |
| 340 | | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | | | | 53,5 | |
| 341 | 300 | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 156 | 156 | | | | 156 | 156 | | | | | 57,0 | |
| | X | 38 | 38 | - | | | | | | | | X | X | | | | X | X | | | | | | |
| | 300 | 48 | 38 | - | | | | | | | | 300 | 300 | | | | 300 | 300 | | | | | 64,0 | |
| 342 | | 48 | 38 | - | | 180 | 130 | - | | | | | | | | | | | | | | | | |
| 343 | | 33 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 35,6 | |
| 344 | 350 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 222 | 72 | | | | 222 | 72 | | | | | 38,3 | |
| | X | 33 | 33 | - | | | | | | | | X | X | | | | X | X | | | | | | |
| | 200 | 48 | 38 | - | | | | | | | | 200 | 350 | | | | 200 | 350 | | | | | 49,3 | |
| 345 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | | |
| 346 | | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | | | | 52,5 | |
| 347 | 350 | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 206 | 106 | | | | 206 | 106 | | | | | 55,5 | |
| | X | 38 | 38 | - | | | | | | | | X | X | | | | X | X | | | | | | |
| | 250 | 48 | 38 | - | | | | | | | | 250 | 350 | | | | 250 | 350 | | | | | 62,0 | |
| 348 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | | |
| 349 | | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | | | | 61,5 | |
| 350 | 350 | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 206 | 206 | | | | 206 | 206 | | | | | 66,0 | |
| | X | 38 | 38 | - | | | | | | | | X | X | | | | X | X | | | | | | |
| | 300 | 48 | 38 | - | | | | | | | | 300 | 350 | | | | 300 | 350 | | | | | 74,0 | |
| 351 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | | |
| 352 | | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | | | | 71,5 | |
| 353 | 350 | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 206 | 206 | | | | 206 | 206 | | | | | 76,5 | |
| | X | 38 | 38 | - | | | | | | | | X | X | | | | X | X | | | | | | |
| | 350 | 48 | 38 | - | | | | | | | | 350 | 350 | | | | 350 | 350 | | | | | 86,0 | |
| 354 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | | |
| 355 | | 33 | 28 | - | | 160 | 112 | - | | | | | | | | | | | | | | | 40,4 | |
| 356 | 400 | 33 | 33 | - | 24/25 | 160 | 125 | - | | | | 272 | 72 | | | | 272 | 72 | | | | | 43,5 | |
| | X | 33 | 33 | - | | | | | | | | X | X | | | | X | X | | | | | | |
| | 200 | 48 | 38 | - | | | | | | | | 200 | 400 | | | | 200 | 400 | | | | | 56,0 | |
| 357 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | | |
| 358 | | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | | | | 59,0 | |
| 359 | 400 | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 256 | 106 | | | | 256 | 106 | | | | | 63,0 | |
| | X | 38 | 38 | - | | | | | | | | X | X | | | | X | X | | | | | | |
| | 250 | 48 | 38 | - | | | | | | | | 250 | 400 | | | | 250 | 400 | | | | | 70,5 | |
| 360 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | | |

| Buchsentyp / Type of bushing | | |
|---|---|---|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | | |
|  |  |  |
| FS 330 RM | FS 340 RM | FS 350 RM |
| 141 | 142 | 143 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
|  |  |  |
| FS 331 | FS 351 | FS 355 |
| 131 | 132 | 133 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
|  |  |  |
| FS 353 + FS 325 | FS 357 + FS 325 | FS 358 + FS 325 |
| 151 | 152 | 153 |

| Säulentyp / Type of leader pin | |
|---|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
|  |  |
| FS 320 | FS 319 |
| IEP | IER |

| Gestelltyp / Type of die set |
|---|
|  |
|  |
|  |

| Position der Haltestücke / Position of holding clamps | |
|---|---|
|  |  |
| Pos. Z | Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------------|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 141 131 | | | 142 132 | | | 143 133 | | | | 151 152 153 | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | c X A | | | |
| 361 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 87,0 |
| 362 | 400 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 232 | 132 | | | 232 | 132 | | | 96,5 |
| | X | 48 | 48 | - | | | | | | | | X | X | | | X | X | | | |
| | 300 | | | | | | | | | | | 300 | 400 | | | 300 | 400 | | | 106,0 |
| 363 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 364 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 101,0 |
| 365 | 400 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 232 | 182 | | | 232 | 182 | | | 112,0 |
| | X | 48 | 48 | - | | | | | | | | X | X | | | X | X | | | |
| | 350 | | | | | | | | | | | 350 | 400 | | | 350 | 400 | | | 123,0 |
| 366 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 367 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 114,0 |
| 368 | 400 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 232 | 232 | | | 232 | 232 | | | 127,0 |
| | X | 48 | 48 | - | | | | | | | | X | X | | | X | X | | | |
| | 400 | | | | | | | | | | | 400 | 400 | | | 400 | 400 | | | 140,0 |
| 369 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 370 | | 38 | 33 | - | | 160 | 125 | - | | | | | | | | | | | | 73,0 |
| 371 | 500 | 38 | 38 | - | 30/32 | 180 | 140 | - | | | | 356 | 106 | | | 356 | 106 | | | 78,0 |
| | X | 38 | 38 | - | | | | | | | | X | X | | | X | X | | | |
| | 250 | | | | | | | | | | | 250 | 500 | | | 250 | 500 | | | 87,5 |
| 372 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | |
| 373 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 108,0 |
| 374 | 500 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 332 | 132 | | | 332 | 132 | | | 119,0 |
| | X | 48 | 48 | - | | | | | | | | X | X | | | X | X | | | |
| | 300 | | | | | | | | | | | 300 | 500 | | | 300 | 500 | | | 131,0 |
| 375 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 376 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 125,0 |
| 377 | 500 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 332 | 182 | | | 332 | 182 | | | 138,0 |
| | X | 48 | 48 | - | | | | | | | | X | X | | | X | X | | | |
| | 350 | | | | | | | | | | | 350 | 500 | | | 350 | 500 | | | 152,0 |
| 378 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 379 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 141,0 |
| 380 | 500 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 332 | 232 | | | 332 | 232 | | | 157,0 |
| | X | 48 | 48 | - | | | | | | | | X | X | | | X | X | | | |
| | 400 | | | | | | | | | | | 400 | 500 | | | 400 | 500 | | | 173,0 |
| 381 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 382 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 175,0 |
| 383 | 500 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 332 | 332 | | | 332 | 332 | | | 195,0 |
| | X | 48 | 48 | - | | | | | | | | X | X | | | X | X | | | |
| | 500 | | | | | | | | | | | 500 | 500 | | | 500 | 500 | | | 214,0 |
| 384 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 385 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 128,0 |
| 386 | 600 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 432 | 132 | | | 432 | 132 | | | 142,0 |
| | X | 48 | 48 | - | | | | | | | | X | X | | | X | X | | | |
| | 300 | | | | | | | | | | | 300 | 600 | | | 300 | 600 | | | 156,0 |
| 387 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |
| 388 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | 148,0 |
| 389 | 600 | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | 432 | 182 | | | 432 | 182 | | | 165,0 |
| | X | 48 | 48 | - | | | | | | | | X | X | | | X | X | | | |
| | 350 | | | | | | | | | | | 350 | 600 | | | 350 | 600 | | | 181,0 |
| 390 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | |

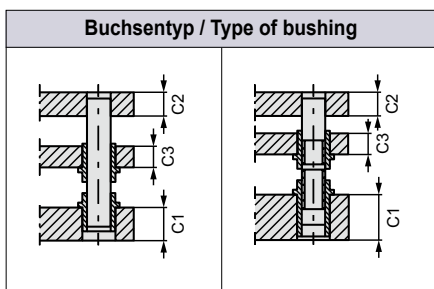
| Buchsentyp / Type of bushing | | |
|--|-----------------|-----------------|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | | |
| | | |
| FS 330 RM | FS 340 RM | FS 350 RM |
| 141 | 142 | 143 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | | |
| | | |
| FS 331 | FS 351 | FS 355 |
| 131 | 132 | 133 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | | |
| | | |
| FS 353 + FS 325 | FS 357 + FS 325 | FS 358 + FS 325 |
| 151 | 152 | 153 |

| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 320 | FS 319 |
| IEP | IER |

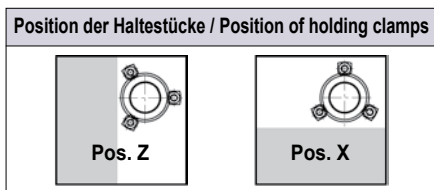
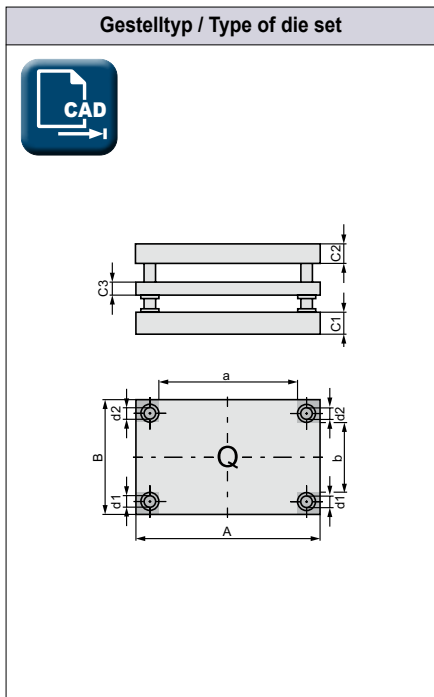
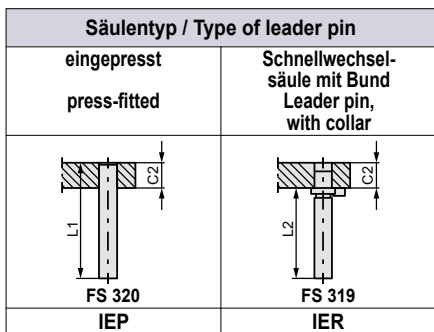
| Gestelltyp / Type of die set |
|------------------------------|
| |
| |

| Position der Haltestücke / Position of holding clamps |
|---|
| |
| |
| Pos. Z |
| Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|-------------|--|-------|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 141 131 | | | 142 132 | | | 143 133 | | | 151 152 | | | 153 | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | a X B | b X A | | c X A | a X B | b X A | c X A | | | |
| 391 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | 168,0 | |
| | 600 | | | | | | | | | | | | | | | | | | | | | | | |
| 392 | X | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | | | | | | | | | | | | 187,0 | |
| | 400 | | | | | | | | | | | | | | | | | | | | | | | |
| 393 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | 206,0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 394 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | | 259,0 |
| | 600 | | | | | | | | | | | | | | | | | | | | | | | |
| 395 | X | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | | | | | | | | | | | | | 283,0 |
| | 500 | | | | | | | | | | | | | | | | | | | | | | | |
| 396 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | | 306,0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 397 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | | 309,0 |
| | 600 | | | | | | | | | | | | | | | | | | | | | | | |
| 398 | X | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | | | | | | | | | | | | | 337,0 |
| | 600 | | | | | | | | | | | | | | | | | | | | | | | |
| 399 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | | 365,0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 400 | | 48 | 38 | - | | 180 | 140 | - | | | | | | | | | | | | | | | | 172,0 |
| | 700 | | | | | | | | | | | | | | | | | | | | | | | |
| 401 | X | 48 | 48 | - | 38/40 | 200 | 160 | - | | | | | | | | | | | | | | | | 191,0 |
| | 350 | | | | | | | | | | | | | | | | | | | | | | | |
| 402 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | | 210,0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 403 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | | 242,0 |
| | 700 | | | | | | | | | | | | | | | | | | | | | | | |
| 404 | X | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | | | | | | | | | | | | | 264,0 |
| | 400 | | | | | | | | | | | | | | | | | | | | | | | |
| 405 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | | 286,0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 406 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | | 300,0 |
| | 700 | | | | | | | | | | | | | | | | | | | | | | | |
| 407 | X | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | | | | | | | | | | | | | 328,0 |
| | 500 | | | | | | | | | | | | | | | | | | | | | | | |
| 408 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | | 356,0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 409 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | | 359,0 |
| | 700 | | | | | | | | | | | | | | | | | | | | | | | |
| 410 | X | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | | | | | | | | | | | | | 392,0 |
| | 600 | | | | | | | | | | | | | | | | | | | | | | | |
| 411 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | | 425,0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 412 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | | 276,0 |
| | 800 | | | | | | | | | | | | | | | | | | | | | | | |
| 413 | X | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | | | | | | | | | | | | | 301,0 |
| | 400 | | | | | | | | | | | | | | | | | | | | | | | |
| 414 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | | 326,0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 415 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | | 342,0 |
| | 800 | | | | | | | | | | | | | | | | | | | | | | | |
| 416 | X | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | | | | | | | | | | | | | 374,0 |
| | 500 | | | | | | | | | | | | | | | | | | | | | | | |
| 417 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | | 405,0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 418 | | 58 | 48 | - | | 224 | 160 | - | | | | | | | | | | | | | | | | 409,0 |
| | 800 | | | | | | | | | | | | | | | | | | | | | | | |
| 419 | X | 58 | 58 | - | 48/50 | 250 | 180 | - | | | | | | | | | | | | | | | | 447,0 |
| | 600 | | | | | | | | | | | | | | | | | | | | | | | |
| 420 | | 68 | 58 | - | | 250 | 180 | - | | | | | | | | | | | | | | | | 484,0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |



| | |
|---|---------------------|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | |
| C1: FS 340 RM | C1: FS 350 RM |
| C3: FS 330 RM | C3: FS 330 RM |
| 182 | 183 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 351 | C1: FS 355 |
| C3: FS 331 | C3: FS 331 |
| 172 | 173 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 358 + FS 325 | C1: FS 353 + FS 325 |
| C3: FS 357 + FS 325 | C3: FS 357 + FS 325 |
| 192 | 193 |



| Größe / Size | Abmessungen / Dimensions | | | | | | | | Arbeitsflächen / Working area | | | | | | | | Gewicht / Weight [kg] |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|-----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-----|-----|-----------------------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 182 172 | | | 183 173 | | 192 | | 193 | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | | | |
| 301 | | 28 | 23 | | | 140 | 125 | - | | | | | | | | | 10,0 |
| 302 | 125 | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | 15 | 15 | | 15 | 15 | 11,8 |
| | 125 | | 38 | 28 | | | 160 | 140 | - | | | 125 | 125 | | 125 | 125 | 13,1 |
| 303 | | | 38 | 28 | | | 180 | 140 | - | | | | | | | | |
| 304 | | | 28 | 23 | | | 140 | 125 | - | | | | | | | | 12,4 |
| 305 | 160 | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | 50 | 15 | | 50 | 15 | 14,2 |
| | 125 | | 38 | 28 | | | 160 | 140 | - | | | 125 | 160 | | 125 | 160 | 16,3 |
| 306 | | | 38 | 28 | | | 180 | 140 | - | | | | | | | | |
| 307 | | | 28 | 23 | | | 140 | 125 | - | | | | | | | | 15,4 |
| 308 | 160 | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | 50 | 50 | | 50 | 50 | 18,4 |
| | 160 | | 38 | 28 | | | 160 | 140 | - | | | 160 | 160 | | 160 | 160 | 20,4 |
| 309 | | | 38 | 28 | | | 180 | 140 | - | | | | | | | | |
| 310 | | | 28 | 23 | | | 140 | 125 | - | | | | | | | | 15,1 |
| 311 | 200 | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | 90 | 15 | | 90 | 15 | 18,0 |
| | 125 | | 38 | 28 | | | 160 | 140 | - | | | 125 | 200 | | 125 | 200 | 20,0 |
| 312 | | | 38 | 28 | | | 180 | 140 | - | | | | | | | | |
| 313 | | | 28 | 23 | | | 140 | 125 | - | | | | | | | | 18,9 |
| 314 | 200 | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | 90 | 50 | | 90 | 50 | 22,6 |
| | 160 | | 38 | 28 | | | 160 | 140 | - | | | 160 | 200 | | 160 | 200 | 25,2 |
| 315 | | | 38 | 28 | | | 180 | 140 | - | | | | | | | | |
| 316 | | | 28 | 23 | | | 140 | 125 | - | | | | | | | | 23,2 |
| 317 | 200 | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | 90 | 90 | | 90 | 90 | 27,9 |
| | 200 | | 38 | 28 | | | 160 | 140 | - | | | 200 | 200 | | 200 | 200 | 31,1 |
| 318 | | | 38 | 28 | | | 180 | 140 | - | | | | | | | | |
| 319 | | | 28 | 23 | | | 140 | 125 | - | | | | | | | | 18,5 |
| 320 | 250 | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | 140 | 15 | | 140 | 15 | 22,1 |
| | 125 | | 38 | 28 | | | 160 | 140 | - | | | 125 | 250 | | 125 | 250 | 24,6 |
| 321 | | | 38 | 28 | | | 180 | 140 | - | | | | | | | | |
| 322 | | | 28 | 23 | | | 140 | 125 | - | | | | | | | | 23,2 |
| 323 | 250 | X | 38 | 28 | 23 | 19/20 | 160 | 140 | - | | | 140 | 50 | | 140 | 50 | 27,9 |
| | 160 | | 38 | 28 | | | 160 | 140 | - | | | 160 | 250 | | 160 | 250 | 31,1 |
| 324 | | | 38 | 28 | | | 180 | 140 | - | | | | | | | | |
| 325 | | | 33 | 28 | | | 160 | 125 | - | | | | | | | | 35,0 |
| 326 | 250 | X | 48 | 38 | 23 | 24/25 | 180 | 160 | - | | | 122 | 72 | | 122 | 72 | 44,8 |
| | 200 | | 48 | 38 | | | 180 | 160 | - | | | 200 | 250 | | 200 | 250 | 48,7 |
| 327 | | | 48 | 38 | | | 200 | 160 | - | | | | | | | | |
| 328 | | | 33 | 28 | | | 160 | 125 | - | | | | | | | | 43,2 |
| 329 | 250 | X | 48 | 38 | 23 | 24/25 | 180 | 160 | - | | | 122 | 122 | | 122 | 122 | 55,5 |
| | 250 | | 48 | 38 | | | 180 | 160 | - | | | 250 | 250 | | 250 | 250 | 60,5 |
| 330 | | | 48 | 38 | | | 200 | 160 | - | | | | | | | | |

SÄULENGESTELLE / DIE SETS

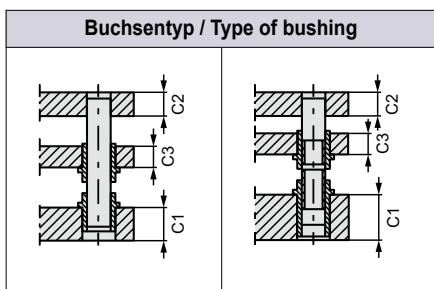
| Buchsentyp / Type of bushing | |
|---|---------------------|
| | |
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | |
| C1: FS 340 RM | C1: FS 350 RM |
| C3: FS 330 RM | C3: FS 330 RM |
| 182 | 183 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 351 | C1: FS 355 |
| C3: FS 331 | C3: FS 331 |
| 172 | 173 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 358 + FS 325 | C1: FS 353 + FS 325 |
| C3: FS 357 + FS 325 | C3: FS 357 + FS 325 |
| 192 | 193 |

| Säulentyp / Type of leader pin | |
|--------------------------------|---|
| eingepresst press-fitted | Schnellwechselsäule mit Bund Leader pin, with collar |
| | |
| FS 320 IEP | FS 319 IER |

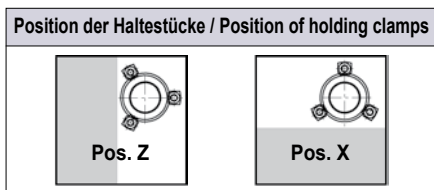
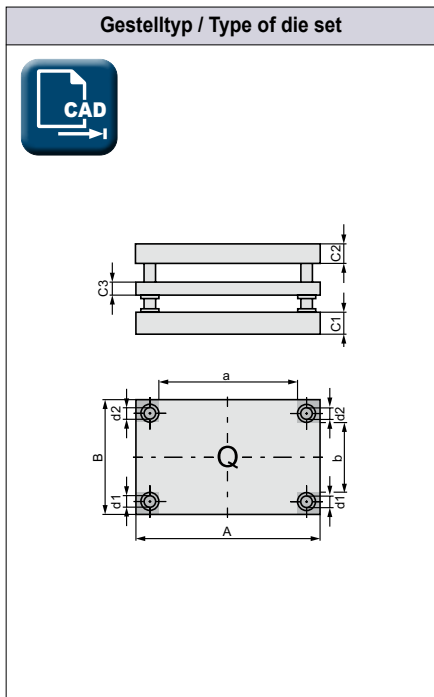
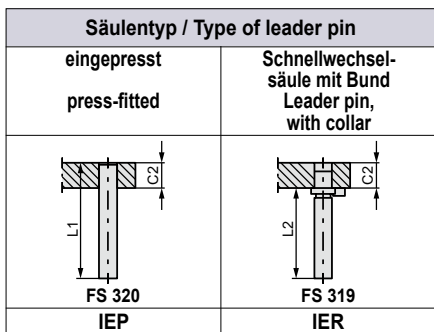
| Gestelltyp / Type of die set | |
|------------------------------|--|
| | |
| | |

| Position der Haltestücke / Position of holding clamps | |
|---|--------|
| | |
| Pos. Z | Pos. X |

| Größe / Size | Abmessungen / Dimensions | | | | | | Arbeitsflächen / Working area | | | | | | | | | Gewicht / Weight [kg] | | | | | | | | | |
|--------------|--------------------------|----------------------------------|----|----|-------|-------------------------------------|-------------------------------|-----|------------|----|---|------------|---|-----|-----|-----------------------|---|-----|---|-----|-----|--|--|------|------|
| | A | Plattenstärke Plate thickness | | | Ø | Säulenlänge Length of leader pin | | | 182 172 | | | 183 173 | | | 192 | | | 193 | | | | | | | |
| | | X | C1 | C2 | | C3 | d1/d2 | L1 | L2 | L3 | a | b | c | a | b | | c | | a | b | c | | | | |
| 331 | | 33 | 28 | | | 160 | 125 | - | | | | | | | | | | | | | | | | 33,7 | |
| 332 | 300 | | 48 | 38 | 23 | 24/25 | 180 | 140 | - | | | | | 172 | 32 | | | | | 172 | 32 | | | | 43,1 |
| | X | | | | | | | | | | | | | X | X | | | | | X | X | | | | |
| | 160 | | 48 | 48 | | | 200 | 140 | - | | | | | 160 | 300 | | | | | 160 | 300 | | | | 46,9 |
| 333 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 334 | 300 | | 33 | 28 | | | 160 | 125 | - | | | | | | | | | | | | | | | | 41,6 |
| | X | | | | | | | | | | | | | 172 | 72 | | | | | 172 | 72 | | | | |
| 335 | | 48 | 38 | 23 | 24/25 | 180 | 140 | - | | | | | | X | X | | | | X | X | | | | | 53,5 |
| 336 | 200 | | 48 | 48 | | | 200 | 140 | - | | | | | 200 | 300 | | | | | 200 | 300 | | | | |
| | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 337 | | 38 | 33 | | | 180 | 140 | - | | | | | | | | | | | | | | | | | 61,5 |
| 338 | 300 | | 48 | 38 | 33 | 30/32 | 200 | 160 | - | | | | | 156 | 106 | | | | | 152 | 106 | | | | |
| | X | | | | | | | | | | | | | X | X | | | | | X | X | | | | |
| 339 | | 250 | 48 | 48 | | | 200 | 160 | - | | | | | 250 | 300 | | | | | 250 | 300 | | | | |
| 340 | | 38 | 33 | | | 180 | 140 | - | | | | | | | | | | | | | | | | | 73,0 |
| 341 | 300 | | 48 | 38 | 33 | 30/32 | 200 | 160 | - | | | | | 156 | 156 | | | | | 156 | 156 | | | | |
| | X | | | | | | | | | | | | | X | X | | | | | X | X | | | | |
| 342 | | 300 | 48 | 48 | | | 200 | 160 | - | | | | | 300 | 300 | | | | | 300 | 300 | | | | |
| 343 | | 33 | 28 | | | 160 | 125 | - | | | | | | | | | | | | | | | | | 48,2 |
| 344 | 350 | | 48 | 38 | 23 | 24/25 | 180 | 160 | - | | | | | 222 | 72 | | | | | 222 | 72 | | | | |
| | X | | | | | | | | | | | | | X | X | | | | | X | X | | | | |
| 345 | | 200 | 48 | 48 | | | 200 | 160 | - | | | | | 200 | 350 | | | | | 200 | 350 | | | | |
| 346 | | 38 | 33 | | | 180 | 140 | - | | | | | | | | | | | | | | | | | 71,0 |
| 347 | 350 | | 48 | 38 | 33 | 30/32 | 200 | 160 | - | | | | | 206 | 106 | | | | | 206 | 106 | | | | |
| | X | | | | | | | | | | | | | X | X | | | | | X | X | | | | |
| 348 | | 250 | 48 | 48 | | | 200 | 160 | - | | | | | 250 | 350 | | | | | 250 | 350 | | | | |
| 349 | | 38 | 33 | | | 180 | 140 | - | | | | | | | | | | | | | | | | | 85,0 |
| 350 | 350 | | 48 | 38 | 33 | 30/32 | 200 | 160 | - | | | | | 206 | 156 | | | | | 206 | 156 | | | | |
| | X | | | | | | | | | | | | | X | X | | | | | X | X | | | | |
| 351 | | 300 | 48 | 48 | | | 200 | 160 | - | | | | | 300 | 350 | | | | | 300 | 350 | | | | |
| 352 | | 38 | 33 | | | 180 | 140 | - | | | | | | | | | | | | | | | | | 98,5 |
| 353 | 350 | | 48 | 38 | 33 | 30/32 | 200 | 160 | - | | | | | 206 | 206 | | | | | 206 | 206 | | | | |
| | X | | | | | | | | | | | | | X | X | | | | | X | X | | | | |
| 354 | | 350 | 48 | 48 | | | 200 | 160 | - | | | | | 350 | 350 | | | | | 350 | 350 | | | | |
| 355 | | 33 | 28 | | | 160 | 125 | - | | | | | | | | | | | | | | | | | 55,0 |
| 356 | 400 | | 48 | 38 | 23 | 24/25 | 180 | 140 | - | | | | | 272 | 72 | | | | | 272 | 72 | | | | |
| | X | | | | | | | | | | | | | X | X | | | | | X | X | | | | |
| 357 | | 200 | 48 | 48 | | | 200 | 140 | - | | | | | 200 | 400 | | | | | 200 | 400 | | | | |
| 358 | | 38 | 33 | | | 180 | 140 | - | | | | | | | | | | | | | | | | | 81,0 |
| 359 | 400 | | 48 | 38 | 33 | 30/32 | 200 | 160 | - | | | | | 256 | 106 | | | | | 256 | 106 | | | | |
| | X | | | | | | | | | | | | | X | X | | | | | X | X | | | | |
| 360 | | 250 | 48 | 48 | | | 200 | 160 | - | | | | | 250 | 400 | | | | | 250 | 400 | | | | |

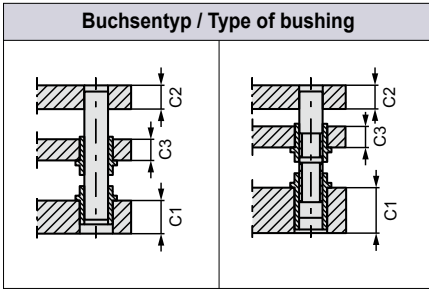


| | |
|---|---------------------|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | |
| C1: FS 340 RM | C1: FS 350 RM |
| C3: FS 330 RM | C3: FS 330 RM |
| 182 | 183 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 351 | C1: FS 355 |
| C3: FS 331 | C3: FS 331 |
| 172 | 173 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 358 + FS 325 | C1: FS 353 + FS 325 |
| C3: FS 357 + FS 325 | C3: FS 357 + FS 325 |
| 192 | 193 |

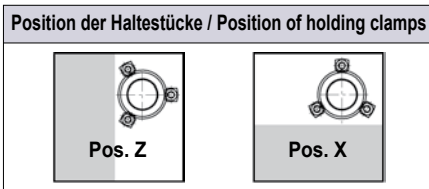
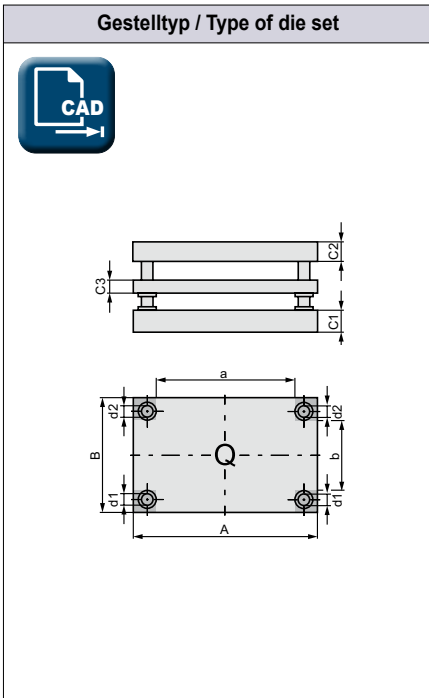
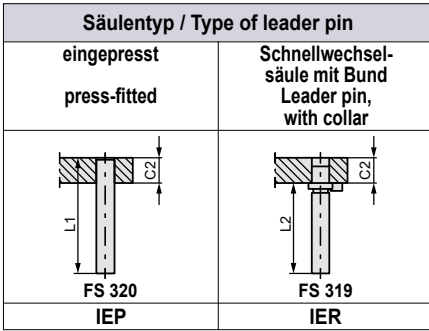


| Größe / Size | Abmessungen / Dimensions | | | | | | | | Arbeitsflächen / Working area | | | | | | | | Gewicht / Weight [kg] | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|-----|----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-----|-----|-----------------------|-------|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 182 172 | | | 183 173 | | 192 193 | | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | c X A | | | | |
| 361 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | 118,0 | |
| 362 | 400 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | 232 | 132 | | | 232 | 132 | | 137,0 |
| 363 | 300 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | 300 | 400 | | | 300 | 400 | | 147,0 |
| 364 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | 137,0 |
| 365 | 400 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | 232 | 182 | | | 232 | 182 | | 159,0 |
| 366 | 350 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | 350 | 400 | | | 350 | 400 | | 170,0 |
| 367 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | 156,0 |
| 368 | 400 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | 232 | 232 | | | 232 | 232 | | 181,0 |
| 369 | 400 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | 400 | 400 | | | 400 | 400 | | 194,0 |
| 370 | | 38 | 33 | | | 180 | 140 | - | | | | | | | | | | 100,0 |
| 371 | 500 | | | | | | | | | | | | | | | | | |
| | X | 48 | 38 | 33 | 30/32 | 200 | 160 | - | | | 356 | 106 | | | 356 | 106 | | 115,0 |
| 372 | 250 | | | | | | | | | | | | | | | | | |
| | X | 48 | 48 | | | 200 | 160 | - | | | 250 | 500 | | | 250 | 500 | | 125,0 |
| 373 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | 146,0 |
| 374 | 500 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | 332 | 132 | | | 332 | 132 | | 170,0 |
| 375 | 300 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | 300 | 500 | | | 300 | 500 | | 182,0 |
| 376 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | 170,0 |
| 377 | 500 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | 332 | 182 | | | 332 | 182 | | 197,0 |
| 378 | 350 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | 350 | 500 | | | 350 | 500 | | 211,0 |
| 379 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | 193,0 |
| 380 | 500 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | 332 | 232 | | | 332 | 232 | | 225,0 |
| 381 | 400 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | 400 | 500 | | | 400 | 500 | | 240,0 |
| 382 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | 240,0 |
| 383 | 500 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | 332 | 332 | | | 332 | 332 | | 279,0 |
| 384 | 500 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | 500 | 500 | | | 500 | 500 | | 299,0 |
| 385 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | 174,0 |
| 386 | 600 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | 432 | 132 | | | 432 | 132 | | 203,0 |
| 387 | 300 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | 300 | 600 | | | 300 | 600 | | 217,0 |
| 388 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | 202,0 |
| 389 | 600 | | | | | | | | | | | | | | | | | |
| | X | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | 432 | 182 | | | 432 | 182 | | 235,0 |
| 390 | 350 | | | | | | | | | | | | | | | | | |
| | X | 58 | 58 | | | 250 | 180 | - | | | 350 | 600 | | | 350 | 600 | | 252,0 |

SÄULENGESTELLE / DIE SETS



| | |
|---|---|
| Stahlbuchse, RM-beschichtet Leader pin bushing, RM plated | |
| C1: FS 340 RM C3: FS 330 RM | C1: FS 350 RM C3: FS 330 RM |
| 182 | 183 |
| Stahlbuchse mit Bronzeplattierung Leader pin bushing, bronze plated | |
| C1: FS 351 C3: FS 331 | C1: FS 355 C3: FS 331 |
| 172 | 173 |
| Stahlbuchse mit Ms-Käfig Leader pin bushing with ball cage | |
| C1: FS 358 + FS 325 C3: FS 357 + FS 325 | C1: FS 353 + FS 325 C3: FS 357 + FS 3CAD25 |
| 192 | 193 |

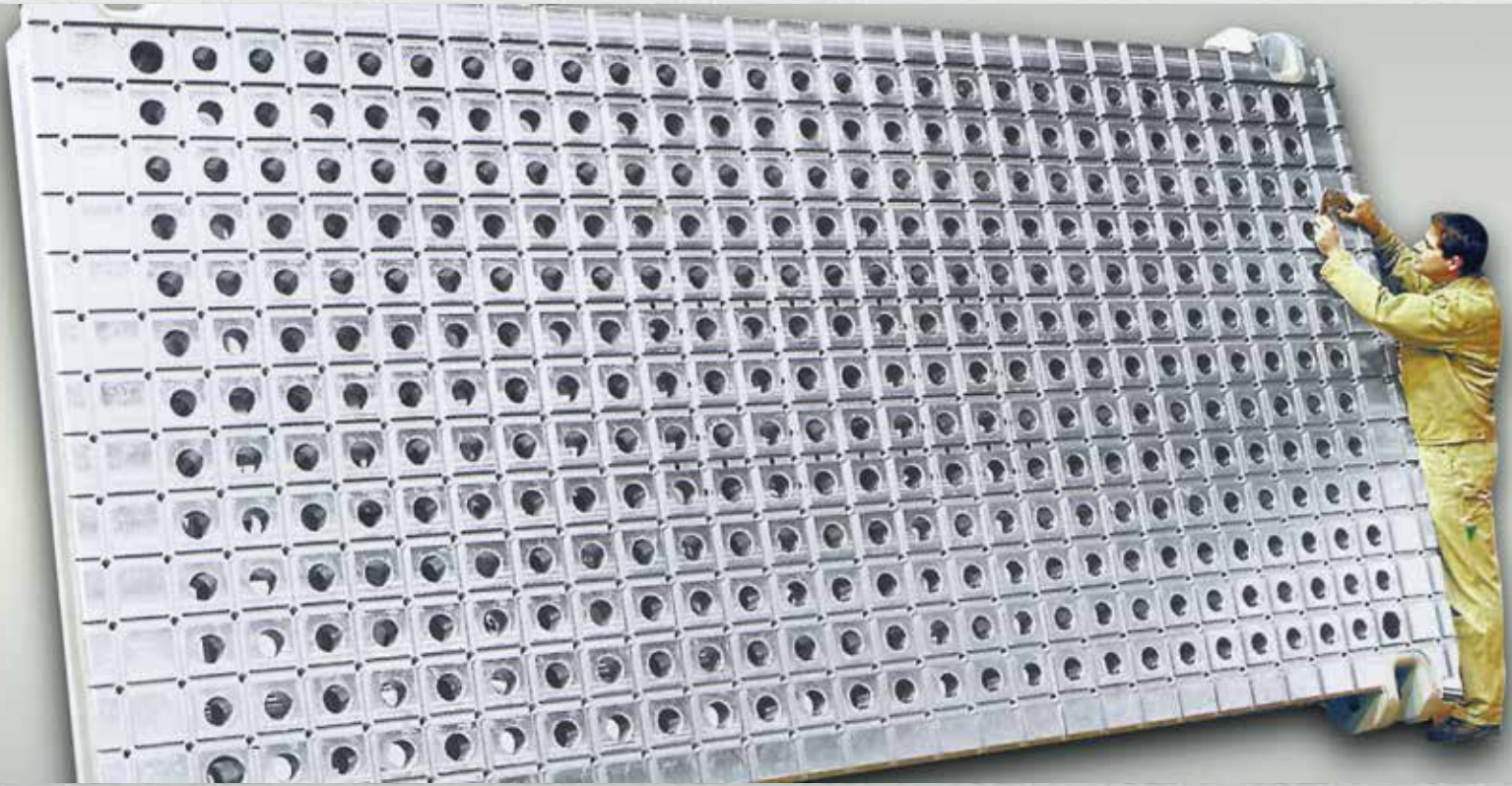


| Größe / Size | Abmessungen / Dimensions | | | | | | | Arbeitsflächen / Working area | | | | | | Gewicht / Weight [kg] | | | | | | | |
|--------------|--------------------------|----------------------------------|----|----|------------|-------------------------------------|----|-------------------------------|-------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|-------------|--|--|--|
| | A X B | Plattenstärke Plate thickness | | | Ø d1/d2 | Säulenlänge Length of leader pin | | | 182 172 | | | 183 173 | | | 192 | | | 193 | | | |
| | | C1 | C2 | C3 | | L1 | L2 | L3 | a X B | b X A | c X A | a X B | b X A | | c X A | a X B | b X A | c X A | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|----|----|----|-------|-----|-----|---|--|--|--|-----|-----|--|--|-----|-----|--|--|--|--|--|-------|
| 391 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | | 230,0 |
| 392 | 600 | 58 | 48 | 38 | 38/40 | 224 | 180 | - | | | | 432 | 232 | | | 432 | 232 | | | | | | 268,0 |
| | X | 58 | 48 | | | | | | | | | X | X | | | X | X | | | | | | |
| | 400 | 58 | 58 | | | 250 | 180 | - | | | | 400 | 600 | | | 400 | 600 | | | | | | 287,0 |
| 393 | | 58 | 58 | | | 250 | 180 | - | | | | | | | | | | | | | | | |
| 394 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | | | | | 348,0 |
| 395 | 600 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 406 | 306 | | | 406 | 306 | | | | | | 395,0 |
| | X | 68 | 58 | | | | | | | | | X | X | | | X | X | | | | | | |
| | 500 | 68 | 68 | | | 280 | 200 | - | | | | 500 | 600 | | | 500 | 600 | | | | | | 419,0 |
| 396 | | 68 | 68 | | | 280 | 200 | - | | | | | | | | | | | | | | | |
| 397 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | | | | | 416,0 |
| 398 | 600 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 406 | 406 | | | 406 | 406 | | | | | | 473,0 |
| | X | 68 | 58 | | | | | | | | | X | X | | | X | X | | | | | | |
| | 600 | 68 | 68 | | | 280 | 200 | - | | | | 600 | 600 | | | 600 | 600 | | | | | | 501,0 |
| 399 | | 68 | 68 | | | 280 | 200 | - | | | | | | | | | | | | | | | |
| 400 | | 48 | 38 | | | 200 | 160 | - | | | | | | | | | | | | | | | 235,0 |
| 401 | 700 | 58 | 48 | 48 | 38/40 | 224 | 180 | - | | | | 532 | 182 | | | 532 | 182 | | | | | | 274,0 |
| | X | 58 | 48 | | | | | | | | | X | X | | | X | X | | | | | | |
| | 350 | 58 | 58 | | | 250 | 180 | - | | | | 350 | 700 | | | 350 | 700 | | | | | | 293,0 |
| 402 | | 58 | 58 | | | 250 | 180 | - | | | | | | | | | | | | | | | |
| 403 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | | | | | 326,0 |
| 404 | 700 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 506 | 206 | | | 506 | 206 | | | | | | 370,0 |
| | X | 68 | 58 | | | | | | | | | X | X | | | X | X | | | | | | |
| | 400 | 68 | 68 | | | 280 | 200 | - | | | | 400 | 700 | | | 400 | 700 | | | | | | 392,0 |
| 405 | | 68 | 68 | | | 280 | 200 | - | | | | | | | | | | | | | | | |
| 406 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | | | | | 405,0 |
| 407 | 700 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 506 | 306 | | | 506 | 306 | | | | | | 460,0 |
| | X | 68 | 58 | | | | | | | | | X | X | | | X | X | | | | | | |
| | 500 | 68 | 68 | | | 280 | 200 | - | | | | 500 | 700 | | | 500 | 700 | | | | | | 487,0 |
| 408 | | 68 | 68 | | | 280 | 200 | - | | | | | | | | | | | | | | | |
| 409 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | | | | | 484,0 |
| 410 | 700 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 506 | 406 | | | 506 | 406 | | | | | | 540,0 |
| | X | 68 | 58 | | | | | | | | | X | X | | | X | X | | | | | | |
| | 600 | 68 | 68 | | | 280 | 200 | - | | | | 600 | 700 | | | 600 | 700 | | | | | | 583,0 |
| 411 | | 68 | 68 | | | 280 | 200 | - | | | | | | | | | | | | | | | |
| 412 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | | | | | 371,0 |
| 413 | 800 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 606 | 206 | | | 606 | 206 | | | | | | 421,0 |
| | X | 68 | 58 | | | | | | | | | X | X | | | X | X | | | | | | |
| | 400 | 68 | 68 | | | 280 | 200 | - | | | | 400 | 800 | | | 400 | 800 | | | | | | 447,0 |
| 414 | | 68 | 68 | | | 280 | 200 | - | | | | | | | | | | | | | | | |
| 415 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | | | | | 461,0 |
| 416 | 800 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 606 | 306 | | | 606 | 306 | | | | | | 524,0 |
| | X | 68 | 58 | | | | | | | | | X | X | | | X | X | | | | | | |
| | 500 | 68 | 68 | | | 280 | 200 | - | | | | 500 | 800 | | | 500 | 800 | | | | | | 556,0 |
| 417 | | 68 | 68 | | | 280 | 200 | - | | | | | | | | | | | | | | | |
| 418 | | 58 | 48 | | | 224 | 180 | - | | | | | | | | | | | | | | | 552,0 |
| 419 | 800 | 68 | 58 | 48 | 48/50 | 250 | 200 | - | | | | 606 | 406 | | | 606 | 406 | | | | | | 627,0 |
| | X | 68 | 58 | | | | | | | | | X | X | | | X | X | | | | | | |
| | 600 | 68 | 68 | | | 280 | 200 | - | | | | 600 | 800 | | | 600 | 800 | | | | | | 665,0 |
| 420 | | 68 | 68 | | | 280 | 200 | - | | | | | | | | | | | | | | | |



Märkische Stanz-Partner



[stanznormalien]

Großstahlplatten und Stahl-Schweiß-
Konstruktionen mit Sonderbearbeitungen

[standarddiecomponents]

XXL - Steel plates and welded units
with additional work / secondary operation





CNC - Brennschneiden
CNC - flame cutting

Glühen
Annealing

Stahlkies strahlen
Steel shot blasting

Richten
Flattening

Farbgebung - Grundierung
Coloring - priming

CNC - Diskusschleifen
CNC - rotary grinding

CNC - Feinschleifen
CNC - finish grinding

Materiallager ST 52-3, Blechdicken 10 – 600 mm
Stock ST 52-3, sheet thickness 10 – 600 mm

Abmessungen 6.000 x 3.000 x 2.000 mm, bis 25 t Stückgewicht
Dimensions 6.000 x 3.000 x 2.000 mm, up to 25 t unit weight

Abmessungen 6.000 x 3.000 x 2.000 mm, bis 25 t Stückgewicht
Dimensions 6.000 x 3.000 x 2.000 mm, up to 25 t unit weight

Abmessungen 6.000 x 3.000 x 2.000 mm, bis 25 t Stückgewicht
Dimensions 6.000 x 3.000 x 2.000 mm, up to 25 t unit weight

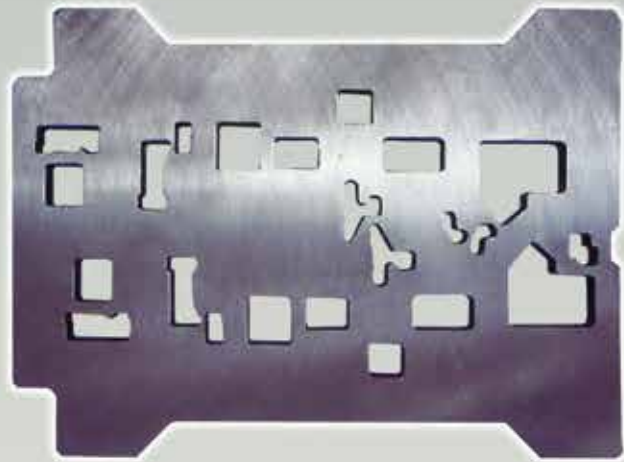
Abmessungen 6.000 x 3.000 x 2.000 mm, bis 25 t Stückgewicht
Dimensions 6.000 x 3.000 x 2.000 mm, up to 25 t unit weight

Verfahrweg
Travelling distance 4.000 x 1.250 x 300 mm

Verfahrweg
Travelling distance 3.000 x 1.600 x 600 mm

XXL - Steel plates and welded units

SÄULENGESTELLE / DIE SETS



CNC - Lehrenbohren
CNC - jig boring

Verfahrweg 3.000 x 1.600 x 600 mm
Travelling distance

CNC - Portalfräsen
CNC - portal milling

Verfahrweg 7.000 x 3.000 x 1.400 mm
Travelling distance

CNC - Fräsen und Bohren
CNC - milling and -drilling

Verfahrweg 4.900 x 2.400 x 800 mm
Travelling distance

CNC - Portalmessen
CNC - portal measuring

Verfahrweg 3.000 x 1.600 x 800 mm
Travelling distance

CNC - Tieflochbohren
CNC - gun drilling

Durchmesser 30 – 120 mm / Diameter 30 – 120 mm
bis 1.500 mm als Sacklochbohrung / Blind holes up to 1.500 mm deep
bis 3.000 mm als Durchgangsbohrung / Through holes up to 3.000 mm long

Die Herstellung/Bearbeitung der Produkte erfolgt nach Kundenzeichnung oder nach CAD-Datei im DXF-, DWG-, IGES-, VDA- oder Catia-Format. / Basis for the manufacturing process are drawings supplied by the customer, printed or as DXF-, DWG-, IGES-, VDA- or Catia - CAD - data files.





Märkische Stanz-Partner

[lieferprogramm] [productrange]



[säulengestelle]
in Standard- und Sonder-
Abmessungen ab 125 x 125 mm
bis 3.000 x 6.000 mm

[diesets]
in standard and custom sizes
between 125 x 125 mm up to
3.000 x 6.000 mm



[führungssysteme]
in den verschiedensten
Ausführungen

[guidingsystems]
available in various designs



[schneidelemente]
mit unterschiedlichsten
Schneidgeometrien

[cuttingelements]
with countless cutting-tip
geometries



[technischeHilfsmittel]
umfangreiche Auswahl von
Schrauben bis zu kleinen
Schiebern

[generaldiecomponents]
huge selection ranging from
screws to small cam units



[feder-elemente]
umfangreiches Programm an ISO-,
Elastomer- und ähnlichen Federn

[springs]
extensive program of ISO-,
elastomer- and similar springs



[azolgasGasdruckfedern]
umfangreiches Programm für
unterschiedliche Anwendungen

[azolgasGasSprings]
large program for all commonly
used applications



[hysonStickstoffSysteme]
große Auswahl aus dem Programm
eines der Weltmarktführer

[hysonNitrogenSystems]
huge program from one of the
world market leaders

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