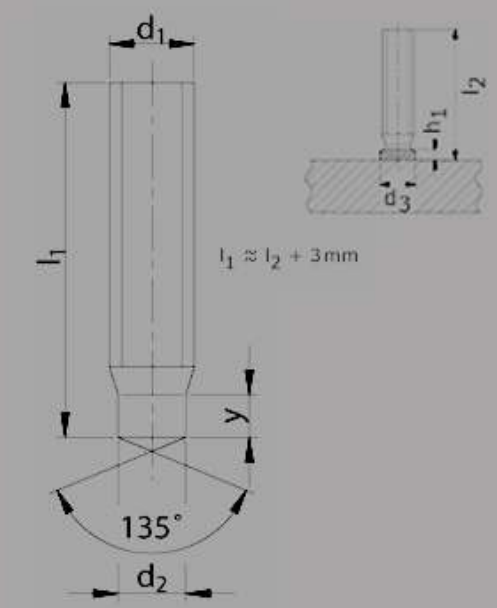
PRIVARILNI ELEMENTI



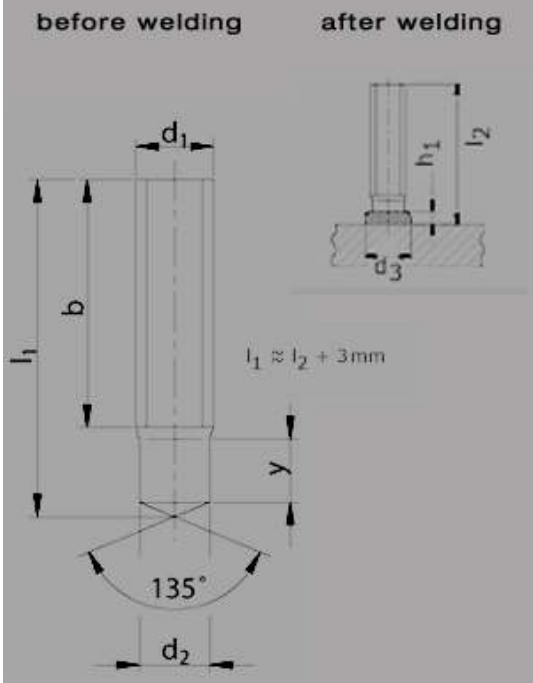

## Threaded Studs RD

| $d_1$ | M6 | M8 | M10 | M12 | M16 | M20 | M24 |
|---|---|---|---|---|---|---|---|
| $d_2$ | 4,7 | 6,2 | 7,9 | 9,5 | 13,2 | 16,5 | 20 |
| $d_3$ | 7 | 9 | 11,5 | 13,5 | 18 | 23 | 28 |
| $h_1$ | 2,8 | 2,5 | 3 | 4 | 5 | 6 | 7 |
| a ± 5° | 135° | 135° | 135° | 135° | 135° | 135° | 135° |
| $y_{min}$ | 4 | 4 | 5 | 6 | 7,5/11 | 9/13 | 12/15 |
| $l_{2 \pm 0,5}$ *) | weight about (7,85 kg/dm³) per 1.000pcs in kg (St.37) | | | | | | |
| 0 | | | | | | | |
| 15 | 2,3 | | | | | | |
| 20 | 3,2 | 5,7 | 9,0 | | | | |
| 25 | 4,1 | 7,3 | 11,5 | 16,5 | | | |
| 30 | 5,0 | 8,9 | 14,0 | 20,2 | 36,9 | | |
| 35 | 5,9 | 10,5 | 16,5 | 23,9 | 43,5 | 67,3 | |
| 40 | 6,8 | 12,1 | 19,0 | 27,5 | 50,2 | 77,8 | |
| 45 | | 13,7 | 21,6 | 31,2 | 56,9 | 88,2 | |
| 50 | | 15,3 | 24,1 | 34,8 | 63,5 | 98,6 | 124,4 |
| 55 | | | 26,6 | 38,5 | 70,2 | 109,1 | 136,5 |
| 60 | | | | 42,2 | 76,8 | 119,5 | 148,9 |
| 65 | | | | | 83,5 | 129,9 | 161,3 |
| 70 | | | | | | 140,4 | 173,7 |
| 75 | | | | | | | 186,7 |
| 100 | | | | | | | 249,0 |

*) other length according agreement

Material selection: Other materials according agreement

| ISO-Standard | 4.8 | A2-50 | A4-70 |
|---|---|---|---|
| Old Description | St. 37 | 1.4301 | 1.4571 |
| Product Key | 51-XX-XXXX | 52-XX-XXXX | 58-XX-XXXX |




## Threaded Studs PD

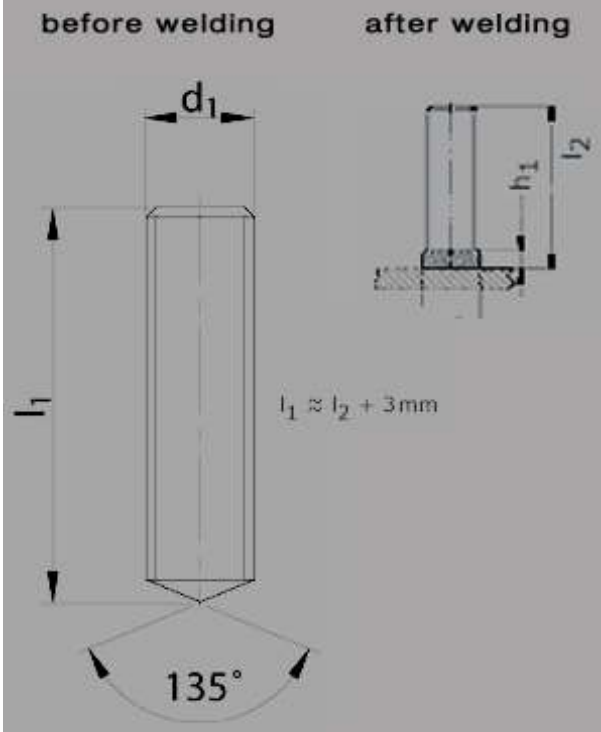
| $d_1$ | M6 | M8 | M10 | M12 | M16 | M20 |
|---|---|---|---|---|---|---|
| $d_2$ | 5,30 | 7,10 | 8,95 | 10,80 | 14,60 | 18,30 |
| $d_3$ | 8,50 | 10,00 | 12,50 | 15,50 | 19,50 | 24,50 |
| $h_1$ | 3,50 | 3,50 | 4,00 | 4,50 | 6,00 | 7,00 |
| a ± 5° | 135° | 135° | 135° | 135° | 135° | 135° |
| $y_{min}$ | 9 | 9 | 9,5 | 11,5 | 13,5 | 15,5 |
| b | $l_1 - y_{min}$ of studs $l_2$ < = 50mm otherwise 1/3 of $l_2$ 1) | | | | | |
| $l_{2 \pm 0,5}$ *) | weight about (7,85 kg/dm³) per 1.000pcs in kg (St.37) | | | | | |
| 0 | | | | | | |
| 15 | 2,6 | | | | | |
| 20 | 3,5 | 6,4 | 10,0 | | | |
| 25 | 4,4 | 8,0 | 12,6 | 18,2 | | |
| 30 | 5,3 | 9,6 | 15,1 | 21,8 | 39,9 | |
| 35 | 6,2 | 11,1 | 17,6 | 25,4 | 46,6 | |
| 40 | 7,1 | 12,7 | 20,1 | 29,1 | 53,3 | 72,9 |
| 45 | | 14,3 | 22,6 | 32,7 | 59,9 | 83,3 |
| 50 | | 15,9 | 25,1 | 36,3 | 66,6 | 93,7 |
| 60 | | | 50,2 | 72,7 | 79,9 | 104,1 |
| 70 | | | 75,4 | 109,0 | 133,2 | 124,9 |
| 100 | | | 80,4 | 116,3 | 199,7 | 145,7 |
| 150 | | | | | | 140,4 |

*) other length according agreement

Material selection: Other materials according agreement

| ISO-Standard | 4.8 | A2-50 |
|---|---|---|
| Old Description | St. 37 | 1.4301 |
| Product Key | 71-XX-XXXX | 72-XX-XXXX |

## Threaded Studs MD



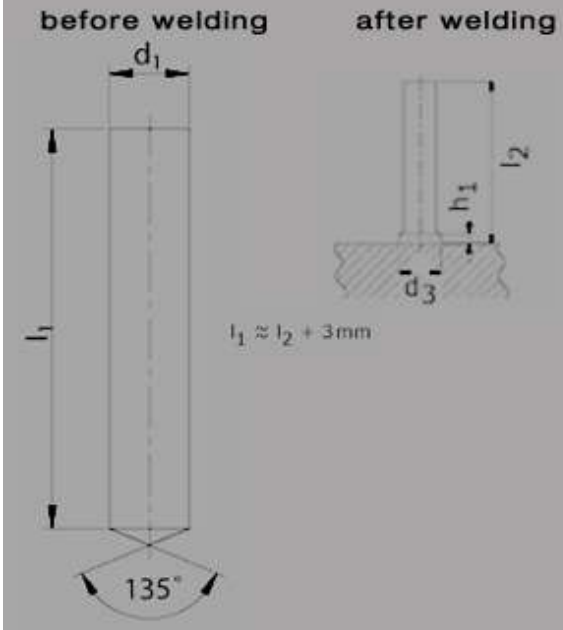

| $d_1$ | M6 | M8 | M10 | M12 | M16 | M20 |
|---|---|---|---|---|---|---|
| $d_{3 \pm 0,2}$ | 8,7 | 11,0 | 13,5 | 15,5 | 20,5 | 25,0 |
| h1 | 3,2 | 3,2 | 3,2 | 3,2 | 4,7 | 5,0 |
| a ± 5° | 135° | 135° | 135° | 135° | 135° | 135° |
| $l_{2 \pm 0,5}$ *) 0 | weight about (7,85 kg/dm³) per 1.000pcs in kg (St.37) | | | | | |
| 15 | 2,62 | | | | | |
| 20 | 3,50 | 6,13 | 10,00 | | | |
| 25 | 4,37 | 7,75 | 12,50 | 18,00 | | |
| 30 | 5,25 | 9,30 | 15,00 | 21,60 | 39,00 | 61,80 |
| 35 | 6,15 | 10,80 | 17,50 | 25,20 | 45,50 | 72,20 |
| 40 | 7,00 | 12,40 | 20,00 | 28,60 | 52,00 | 82,30 |
| 45 | 7,88 | 14,00 | 22,50 | 32,20 | 58,50 | 92,80 |
| 50 | 8,57 | 15,50 | 26,00 | 36,00 | 65,00 | 103,00 |
| 70 | 12,20 | 21,70 | 35,00 | 50,30 | 91,00 | 144,00 |
| 100 | 17,50 | 31,00 | 50,00 | 72,00 | 130,00 | 206,00 |

other length according agreement

Material selection: Other materials according agreement

| ISO-Standard | 4.8 | A2-50 | A4-70 |
|---|---|---|---|
| Old Description | St. 37 | 1.4301 | 1.4571 |
| Product Key | 61-XXX-XXXX | 62-XXX-XXXX | 68-XXX-XXXX |

## No-thread Studs UD




| $d_1$ | 6 | 8 | 10 | 12 | 16 |
|---|---|---|---|---|---|
| $d_3$ | 8,5 | 11 | 13 | 16 | 21 |
| h1 | 4 | 4 | 4 | 5 | 7 |
| a ± 5° | 135° | 135° | 135° | 135° | 135° |
| $l_{2 \pm 0,5}$ *) 0 | weight about (7,85 kg/dm³) per 1.000pcs in kg (St.37) | | | | |
| 20 | 5,137 | 9,133 | 14,271 | 20,550 | 36,533 |
| 25 | 6,254 | 11,119 | 17,373 | 25,017 | 44,475 |
| 30 | 7,371 | 13,104 | 20,475 | 29,484 | 52,417 |
| 40 | 9,605 | 17,075 | 26,680 | 38,419 | 68,301 |
| 50 | 11,838 | 21,046 | 32,885 | 47,354 | 84,185 |
| 60 | 14,072 | 25,017 | 39,089 | 56,289 | 100,069 |
| 70 | 16,306 | 29,988 | 45,294 | 65,223 | 115,952 |
| 80 | 18,539 | 32,959 | 51,499 | 74,158 | 131,836 |

*) other length according agreement

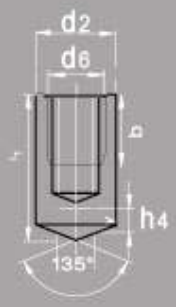
Material selection: Other materials according agreement

| ISO-Standard | 4.8 | A2-50 |
|---|---|---|
| Old Description | St. 37 | 1.4301 |
| Product Key | 21-XXX-XXXX | 22-XXX-XXXX |

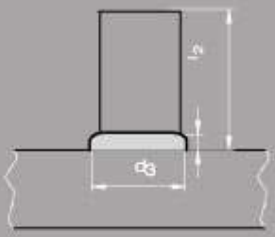
**Ordering sample: UD6x20 of A2-50 = Art.No. 22-006-0020**

## Tapped Studs ID

before welding




after welding



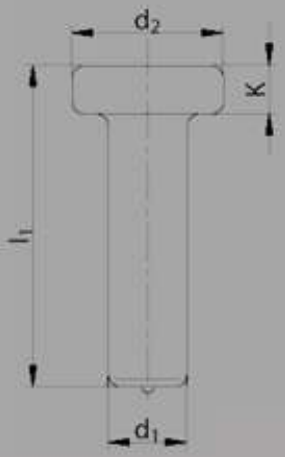

| d6 | M5 | M6 | M8 | M8 | M10 | M10 | M12 |
|---|---|---|---|---|---|---|---|
| d3 | 13 | 13 | 16 | 18,5 | 18,5 | 21 | 23 |
| d2 | 10 | 10 | 12 | 14,6 | 14,6 | 16 | 18 |
| b | 7 | 9 | 9,5 | 15 | 15 | 15 | 18 |
| a ± 2,5° | 22,5° | 22,5° | 22,5° | 22,5° | 22,5° | 22,5° | 22,5° |
| h ±1 | l2+2,8 | l2+2,8 | l2+3,4 | l2+3,9 | l2+3,9 | l2+3,9 | l2+4,2 |
| l2 | 15 | 15 | 20 | 25 | 25 | 25 | 30 |
| h4 | 4 | 4 | 5 | 6 | 6 | 7 | 7 |

other lengths according agreement

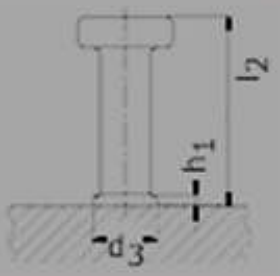
Odering sample: ID5x12 of 4.8 = Art.No. 31-058-0012

## SD

before welding




after welding




| $d_{1\ -0,4}$ | 10 | 13 | 16 | 19 | 22 | 25 |
|---|---|---|---|---|---|---|
| $d_{2\ \pm 0,3}$ | 19 | 25 | 32 | 32 | 35 | 40 |
| $d_3$ | 13 | 17 | 21 | 23 | 29 | 31 |
| $h_1$ | 2,5 | 3 | 4,5 | 6 | 6 | 7 |
| k ± 0,5 | 7 | 8 | 8 | 10 | 10 | 12 |
| $l_{2\ \pm 1}$ *) - 2 | weight about (7,85 kg/dm³) per 1.000pcs in kg (St.37) | | | | | |
| 50 | 5 | 8 | 12 | 16 | 20 | |
| 75 | 6 | 10 | 16 | 21 | 28 | 37 |
| 100 | 8 | 13 | 20 | 27 | 35 | 47 |
| 125 | 9 | 16 | 24 | 33 | 43 | 57 |
| 150 | 11 | 18 | 28 | 38 | 50 | 66 |
| 175 | 12 | 21 | 32 | 44 | 58 | 76 |
| 200 | | 23 | 36 | 49 | 65 | 85 |
| 225 | | | 40 | 55 | 73 | 95 |
| 250 | | | 44 | 60 | 80 | 105 |
| 275 | | | | 66 | 88 | 114 |
| 300 | | | | 72 | 95 | 124 |
| 325 | | | | 77 | 102 | 134 |
| 350 | | | | 83 | 110 | 143 |

*) other length according agreement

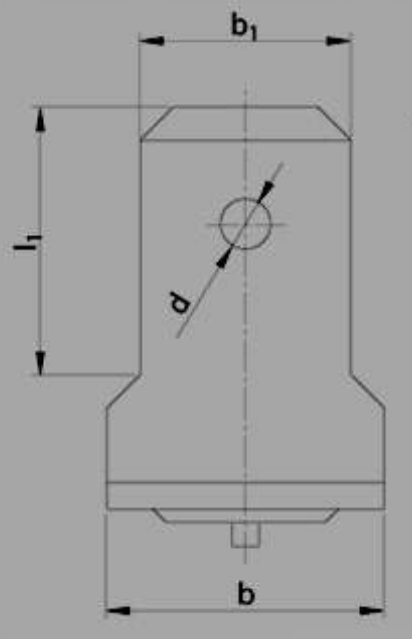
Material selection: Other materials according agreement

| | |
|---|---|
| ISO-Standard | S235J2G3 + C450 |
| Old Description | St. 37-3K |
| Product Key | 81-XXX-XXXX |

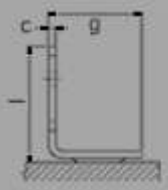
Ordering sample SD M10x50 of S235J2G3+C450 =Art.No.81-010-0050

## Flat Connector FL 6,3

before welding




after welding



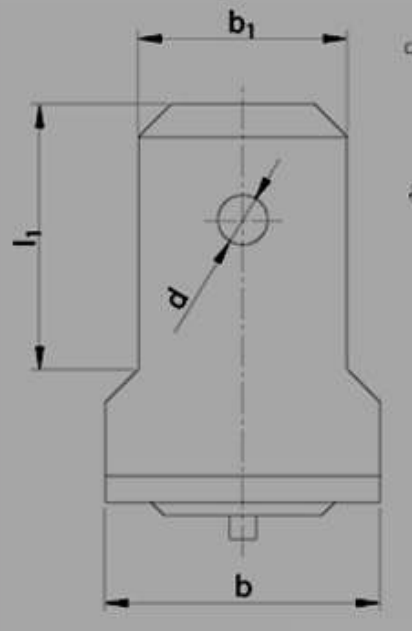

| | |
|---|---|
| $c_{\pm 0,05}$ | 0,8 |
| $l_{\pm 0,8}$ | 12 |
| $l_{1 \pm 0,2}$ | 8 |
| $d_{\pm 0,1}$ | 1,5 |
| $b_{\pm 0,2}$ | 8 |
| $b_{1 \pm 0,1}$ | 6,3 |
| $g_{\pm 0,8}$ | 10 |
| weight about(7,85 kg/dm$^3$) per 1.000pcs in kg (St. 37) | 0,93 |

Material selection: Other materials according agreement

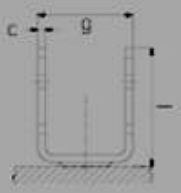
| ISO-Standard | 4.8 | A2-50 | CuZn 37 | AlMg 3 |
|---|---|---|---|---|
| Old Description | St. 37 verk. | 1.4301 | MS 63 | Aluminium |
| Product Key | 01-063-0010 | 02-063-0010 | 03-063-0010 | 04-063-0010 |

## Double Flat Connector DFL

before welding




after welding




| | |
|---|---|
| $c_{\pm 0,05}$ | 0,8 |
| $l_{\pm 0,8}$ | 12 |
| $l_{1 \pm 0,2}$ | 8 |
| $d_{\pm 0,1}$ | 1,5 |
| $b_{\pm 0,2}$ | 8 |
| $b_{1 \pm 0,1}$ | 6,3 |
| $g_{\pm 0,8}$ | 10 |
| weight about(7,85 kg/dm$^3$) per 1.000pcs in kg (St. 37) | 1,34 |

Material selection: Other materials according agreement

| ISO-Standard | 4.8 | A2-50 | CuZn 37 | AlMg 3 |
|---|---|---|---|---|
| Old Description | St. 37 verk. | 1.4301 | MS 63 | Aluminium |
| Product Key | 01-063-0011 | 02-063-0011 | 03-063-0011 | 04-063-0011 |