

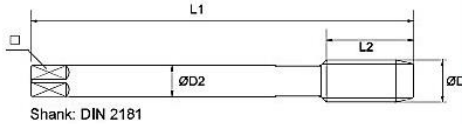
**JOGOS DE MACHOS –MF**

**HSS DIREITOS**

**HSS ESQUERDOS**

**HSSE – 1000N**

**MF** Metric fine thread  
ISO DIN 13  
**Hand Tap Sets**



**Hand Tap Sets for general use**

through holes & blind holes up to 2 x D  
material: HSSG  
Chip removal (like picture)  
ISO2/6H  
Form C straight flutes  
to 900 N/mm<sup>2</sup> 27,1 HRC  
2-3 threads  
outside cooling and lubrication

**Hand Tap Sets for general use Left Hand**

through holes & blind holes up to 2 x D  
material: HSSG  
Chip removal (like picture)  
ISO2/6H  
Form C straight flutes  
to 900 N/mm<sup>2</sup> 27,1 HRC  
2-3 threads  
outside cooling and lubrication

**Hand Tap Sets HSSE for higher demands**

through holes & blind holes up to 2 x D  
material: HSSE  
Chip removal (like picture)  
ISO2/6H  
Form C straight flutes  
bis 1000 N/mm<sup>2</sup> 31 HRC  
2-3 threads  
outside cooling and lubrication

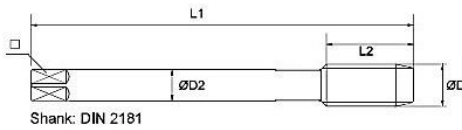
**MF** D1 D2 L1 L2 □

| MF            | D1   | D2   | L1 | L2 | □    | No.   | €         | No.   | €         | No.   | €         |       |
|---------------|------|------|----|----|------|-------|-----------|-------|-----------|-------|-----------|-------|
| MF 2,5 x 0,35 | 2,5  | 2,8  | 40 | 9  | 2,1  | 2,15  | 120301001 | 14,85 |           |       |           |       |
| MF 2,6 x 0,35 | 2,6  | 2,8  | 40 | 9  | 2,1  | 2,25  | 120301002 | 14,85 |           |       |           |       |
| MF 3 x 0,35   | 3,0  | 3,5  | 40 | 9  | 2,7  | 2,65  | 120301003 | 14,85 |           |       |           |       |
| MF 3,5 x 0,35 | 3,5  | 4,0  | 45 | 10 | 3,0  | 3,15  | 120301004 | 14,85 |           |       |           |       |
| MF 4 x 0,35   | 4,0  | 4,5  | 45 | 10 | 3,4  | 3,65  | 120301005 | 14,85 |           |       |           |       |
| MF 4 x 0,5    | 4,0  | 4,5  | 45 | 10 | 3,4  | 3,50  | 120301006 | 14,85 |           |       |           |       |
| MF 4,5 x 0,5  | 4,5  | 6,0  | 50 | 12 | 4,9  | 4,00  | 120301007 | 14,85 |           |       |           |       |
| MF 5 x 0,5    | 5,0  | 6,0  | 50 | 12 | 4,9  | 4,50  | 120301008 | 14,85 |           |       |           |       |
| MF 5 x 0,75   | 5,0  | 6,0  | 50 | 12 | 4,9  | 4,25  | 120301009 | 14,85 |           |       |           |       |
| MF 5,5 x 0,5  | 5,5  | 6,0  | 50 | 12 | 4,9  | 5,00  | 120301010 | 14,85 |           |       |           |       |
| MF 6 x 0,5    | 6,0  | 6,0  | 50 | 14 | 4,9  | 5,50  | 120301011 | 14,85 |           |       |           |       |
| MF 6 x 0,75   | 6,0  | 6,0  | 50 | 14 | 4,9  | 5,20  | 120301012 | 13,30 | 120302001 | 19,83 | 120304001 | 17,82 |
| MF 7 x 0,5    | 7,0  | 6,0  | 50 | 14 | 4,9  | 6,50  | 120301013 | 13,30 |           |       |           |       |
| MF 7 x 0,75   | 7,0  | 6,0  | 50 | 14 | 4,9  | 6,20  | 120301014 | 13,30 |           |       |           |       |
| MF 8 x 0,5    | 8,0  | 6,0  | 50 | 19 | 4,9  | 7,50  | 120301015 | 13,30 |           |       |           |       |
| MF 8 x 0,75   | 8,0  | 6,0  | 50 | 19 | 4,9  | 7,20  | 120301016 | 13,30 | 120302002 | 19,83 | 120304002 | 17,82 |
| MF 8 x 1      | 8,0  | 6,0  | 56 | 22 | 4,9  | 7,00  | 120301017 | 13,30 | 120302003 | 19,83 | 120304003 | 17,82 |
| MF 9 x 0,5    | 9,0  | 7,0  | 56 | 19 | 5,5  | 8,50  | 120301018 | 14,85 |           |       |           |       |
| MF 9 x 0,75   | 9,0  | 7,0  | 56 | 19 | 5,5  | 8,25  | 120301019 | 14,85 |           |       |           |       |
| MF 9 x 1      | 9,0  | 7,0  | 63 | 20 | 5,5  | 8,00  | 120301020 | 14,85 |           |       |           |       |
| MF 10 x 0,5   | 10,0 | 7,0  | 63 | 20 | 5,5  | 9,50  | 120301021 | 14,85 |           |       |           |       |
| MF 10 x 0,75  | 10,0 | 7,0  | 63 | 20 | 5,5  | 9,20  | 120301022 | 14,85 |           |       |           |       |
| MF 10 x 1,0   | 10,0 | 7,0  | 63 | 20 | 5,5  | 9,00  | 120301023 | 13,30 | 120302004 | 19,83 | 120304004 | 19,38 |
| MF 10 x 1,25  | 10,0 | 7,0  | 70 | 24 | 5,5  | 8,80  | 120301024 | 14,85 | 120302005 | 22,27 | 120304005 | 22,27 |
| MF 11 x 0,75  | 11,0 | 8,0  | 63 | 20 | 6,2  | 10,20 | 120301025 | 19,28 |           |       |           |       |
| MF 11 x 1,0   | 11,0 | 8,0  | 63 | 20 | 6,2  | 10,00 | 120301026 | 19,28 |           |       |           |       |
| MF 11 x 1,25  | 11,0 | 8,0  | 63 | 22 | 6,2  | 10,80 | 120301027 | 19,28 |           |       |           |       |
| MF 12 x 0,5   | 12,0 | 9,0  | 70 | 22 | 7,0  | 11,50 | 120301028 | 19,28 |           |       |           |       |
| MF 12 x 0,75  | 12,0 | 9,0  | 70 | 22 | 7,0  | 10,20 | 120301029 | 19,28 |           |       |           |       |
| MF 12 x 1,0   | 12,0 | 9,0  | 70 | 22 | 7,0  | 11,00 | 120301030 | 19,28 | 120302006 | 29,41 | 120304006 | 26,95 |
| MF 12 x 1,25  | 12,0 | 9,0  | 70 | 22 | 7,0  | 10,80 | 120301031 | 19,28 | 120302007 | 29,41 | 120304007 | 26,95 |
| MF 12 x 1,5   | 12,0 | 9,0  | 70 | 22 | 7,0  | 10,50 | 120301032 | 17,51 | 120302008 | 26,95 | 120304008 | 26,95 |
| MF 13 x 0,5   | 13,0 | 11,0 | 70 | 22 | 9,0  | 12,50 | 120301033 | 29,48 |           |       |           |       |
| MF 13 x 0,75  | 13,0 | 11,0 | 70 | 22 | 9,0  | 12,20 | 120301034 | 29,62 |           |       |           |       |
| MF 13 x 1,0   | 13,0 | 11,0 | 70 | 22 | 9,0  | 12,00 | 120301035 | 29,62 |           |       |           |       |
| MF 13 x 1,5   | 13,0 | 11,0 | 70 | 22 | 9,0  | 11,50 | 120301036 | 29,62 |           |       |           |       |
| MF 14 x 0,5   | 14,0 | 11,0 | 70 | 22 | 9,0  | 13,50 | 120301037 | 29,62 |           |       |           |       |
| MF 14 x 0,75  | 14,0 | 11,0 | 70 | 22 | 9,0  | 13,20 | 120301038 | 29,62 |           |       |           |       |
| MF 14 x 1,0   | 14,0 | 11,0 | 70 | 22 | 9,0  | 13,00 | 120301039 | 29,62 |           |       |           |       |
| MF 14 x 1,25  | 14,0 | 11,0 | 70 | 22 | 9,0  | 12,80 | 120301040 | 22,27 | 120302009 | 32,75 | 120304009 | 31,18 |
| MF 14 x 1,5   | 14,0 | 11,0 | 70 | 22 | 9,0  | 12,50 | 120301041 | 19,16 | 120302010 | 29,41 | 120304010 | 28,29 |
| MF 15 x 0,75  | 15,0 | 12,0 | 70 | 22 | 9,0  | 14,20 | 120301042 | 32,74 |           |       |           |       |
| MF 15 x 1,0   | 15,0 | 12,0 | 70 | 22 | 9,0  | 14,00 | 120301043 | 32,74 |           |       |           |       |
| MF 15 x 1,5   | 15,0 | 12,0 | 70 | 22 | 9,0  | 13,50 | 120301044 | 32,74 |           |       |           |       |
| MF 16 x 0,5   | 16,0 | 12,0 | 70 | 22 | 9,0  | 15,50 | 120301045 | 32,74 |           |       |           |       |
| MF 16 x 0,75  | 16,0 | 12,0 | 70 | 22 | 9,0  | 15,20 | 120301046 | 32,74 |           |       |           |       |
| MF 16 x 1,0   | 16,0 | 12,0 | 70 | 22 | 9,0  | 15,00 | 120301047 | 32,74 | 120302011 | 49,01 | 120304011 | 35,86 |
| MF 16 x 1,25  | 16,0 | 12,0 | 70 | 22 | 9,0  | 14,80 | 120301048 | 32,74 |           |       |           |       |
| MF 16 x 1,5   | 16,0 | 12,0 | 70 | 22 | 9,0  | 14,50 | 120301049 | 23,39 | 120302012 | 35,19 | 120304012 | 41,21 |
| MF 17 x 1     | 17,0 | 12,0 | 70 | 22 | 9,0  | 16,00 | 120301050 | 35,86 |           |       |           |       |
| MF 17 x 1,5   | 17,0 | 12,0 | 70 | 22 | 9,0  | 15,50 | 120301051 | 35,86 |           |       |           |       |
| MF 18 x 0,5   | 18,0 | 14,0 | 80 | 22 | 11,0 | 17,50 | 120301052 | 35,86 |           |       |           |       |
| MF 18 x 0,75  | 18,0 | 14,0 | 80 | 22 | 11,0 | 17,20 | 120301053 | 35,86 |           |       |           |       |
| MF 18 x 1,0   | 18,0 | 14,0 | 80 | 22 | 11,0 | 17,00 | 120301054 | 35,86 |           |       |           |       |
| MF 18 x 1,25  | 18,0 | 14,0 | 80 | 22 | 11,0 | 16,80 | 120301055 | 35,86 |           |       |           |       |
| MF 18 x 1,5   | 18,0 | 14,0 | 80 | 22 | 11,0 | 16,50 | 120301056 | 26,95 | 120302013 | 41,21 | 120304013 | 49,90 |



**JOGOS DE MACHOS –MF**      **HSS DIREITOS**      **HSS ESQUERDOS**      **HSSE – 1000N**

**MF** Metric fine thread  
ISO DIN 13  
**Hand Tap Sets**



**Hand Tap Sets**  
for general use

through holes & blind holes up to 2 x D  
material: HSSG ISO2/6H to 900 N/mm<sup>2</sup> 27,1 HRC

Chip removal (like picture)  
Form C straight flutes

2-3 threads      outside cooling and lubrication

**Hand Tap Sets**  
for general use      **Left Hand**

through holes & blind holes up to 2 x D  
material: HSSG ISO2/6H to 900 N/mm<sup>2</sup> 27,1 HRC

Chip removal (like picture)  
Form C straight flutes

2-3 threads      outside cooling and lubrication

**Hand Tap Sets**      **HSSE**  
for higher demands

through holes & blind holes up to 2 x D  
material: HSSE ISO2/6H bis 1000 N/mm<sup>2</sup> 31 HRC

Chip removal (like picture)  
Form C straight flutes

2-3 threads      outside cooling and lubrication

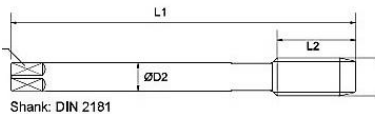
| MF           | D1   | D2   | L1  | L2 | □    | 🔧     | No.       | €      | No.       | €      | No.       | €     |
|--------------|------|------|-----|----|------|-------|-----------|--------|-----------|--------|-----------|-------|
| MF 18 x 2,0  | 18,0 | 14,0 | 80  | 22 | 11,0 | 16,00 | 120301057 | 35,86  |           |        |           |       |
| MF 19 x 1    | 19,0 | 16,0 | 80  | 22 | 12,0 | 18,00 | 120301058 | 44,99  |           |        |           |       |
| MF 19 x 1,5  | 19,0 | 14,0 | 80  | 22 | 11,0 | 17,50 | 120301059 | 44,99  |           |        |           |       |
| MF 20 x 0,5  | 20,0 | 16,0 | 80  | 22 | 12,0 | 19,50 | 120301060 | 44,99  |           |        |           |       |
| MF 20 x 0,75 | 20,0 | 16,0 | 80  | 22 | 12,0 | 19,20 | 120301061 | 44,99  |           |        |           |       |
| MF 20 x 1,0  | 20,0 | 16,0 | 80  | 22 | 12,0 | 19,00 | 120301062 | 44,99  |           |        |           |       |
| MF 20 x 1,25 | 20,0 | 16,0 | 80  | 22 | 12,0 | 18,80 | 120301063 | 44,99  |           |        |           |       |
| MF 20 x 1,5  | 20,0 | 16,0 | 80  | 22 | 12,0 | 18,50 | 120301064 | 32,74  | 120302014 | 49,01  | 120304014 | 46,78 |
| MF 20 x 2,0  | 20,0 | 16,0 | 80  | 22 | 12,0 | 18,00 | 120301065 | 44,99  |           |        | 120304015 | 62,37 |
| MF 21 x 1    | 21,0 | 16,0 | 80  | 22 | 12,0 | 20,00 | 120301066 | 46,55  |           |        |           |       |
| MF 21 x 1,5  | 21,0 | 16,0 | 80  | 22 | 12,0 | 19,50 | 120301067 | 46,55  |           |        |           |       |
| MF 22 x 0,5  | 22,0 | 18,0 | 80  | 22 | 14,5 | 21,50 | 120301068 | 46,55  |           |        |           |       |
| MF 22 x 0,75 | 22,0 | 18,0 | 80  | 22 | 14,5 | 21,20 | 120301069 | 46,55  |           |        |           |       |
| MF 22 x 1,0  | 22,0 | 18,0 | 80  | 22 | 14,5 | 21,00 | 120301070 | 46,55  |           |        |           |       |
| MF 22 x 1,25 | 22,0 | 18,0 | 80  | 22 | 14,5 | 20,80 | 120301071 | 46,55  |           |        |           |       |
| MF 22 x 1,5  | 22,0 | 18,0 | 80  | 22 | 14,5 | 20,50 | 120301072 | 46,55  | 120302015 | 64,60  | 120304016 | 58,36 |
| MF 22 x 2,0  | 22,0 | 18,0 | 80  | 22 | 14,5 | 20,00 | 120301073 | 46,55  |           |        | 120304017 | 62,37 |
| MF 23 x 1    | 23,0 | 18,0 | 80  | 22 | 14,5 | 22,00 | 120301074 | 62,37  |           |        |           |       |
| MF 23 x 1,5  | 23,0 | 18,0 | 80  | 22 | 14,5 | 21,50 | 120301075 | 62,37  |           |        |           |       |
| MF 24 x 0,5  | 24,0 | 18,0 | 90  | 22 | 14,5 | 23,50 | 120301076 | 62,37  |           |        |           |       |
| MF 24 x 0,75 | 24,0 | 18,0 | 90  | 22 | 14,5 | 23,20 | 120301077 | 62,37  |           |        |           |       |
| MF 24 x 1,0  | 24,0 | 18,0 | 90  | 22 | 14,5 | 23,00 | 120301078 | 62,37  |           |        |           |       |
| MF 24 x 1,25 | 24,0 | 18,0 | 90  | 22 | 14,5 | 23,80 | 120301079 | 62,37  |           |        |           |       |
| MF 24 x 1,5  | 24,0 | 18,0 | 90  | 22 | 14,5 | 22,50 | 120301080 | 49,00  | 120302016 | 71,28  | 120304018 | 77,96 |
| MF 24 x 2,0  | 24,0 | 18,0 | 90  | 22 | 14,5 | 22,00 | 120301081 | 62,37  | 120302017 | 93,56  |           |       |
| MF 25 x 1,0  | 25,0 | 18,0 | 90  | 22 | 14,5 | 24,00 | 120301082 | 91,33  |           |        |           |       |
| MF 25 x 1,5  | 25,0 | 18,0 | 90  | 22 | 14,5 | 23,50 | 120301083 | 91,33  |           |        |           |       |
| MF 26 x 1,0  | 26,0 | 18,0 | 90  | 22 | 14,5 | 25,00 | 120301084 | 91,33  |           |        |           |       |
| MF 26 x 1,5  | 26,0 | 18,0 | 90  | 22 | 14,5 | 24,50 | 120301085 | 91,33  |           |        |           |       |
| MF 26 x 2,0  | 26,0 | 18,0 | 90  | 22 | 14,5 | 24,00 | 120301086 | 91,33  |           |        |           |       |
| MF 27 x 1    | 27,0 | 20,0 | 90  | 22 | 16,0 | 26,00 | 120301087 | 91,33  |           |        |           |       |
| MF 27 x 1,5  | 27,0 | 20,0 | 90  | 22 | 16,0 | 25,50 | 120301088 | 91,33  |           |        |           |       |
| MF 27 x 2,0  | 27,0 | 20,0 | 90  | 22 | 16,0 | 25,00 | 120301089 | 108,03 |           |        |           |       |
| MF 28 x 1,0  | 28,0 | 20,0 | 90  | 22 | 16,0 | 27,00 | 120301090 | 108,03 |           |        |           |       |
| MF 28 x 1,5  | 28,0 | 20,0 | 90  | 22 | 16,0 | 26,50 | 120301091 | 108,03 |           |        |           |       |
| MF 28 x 2,0  | 28,0 | 20,0 | 90  | 22 | 16,0 | 26,00 | 120301092 | 108,03 |           |        |           |       |
| MF 29 x 1,5  | 29,0 | 22,0 | 90  | 22 | 18,0 | 27,50 | 120301093 | 108,03 |           |        |           |       |
| MF 30 x 1,0  | 30,0 | 22,0 | 90  | 22 | 18,0 | 29,00 | 120301094 | 126,97 |           |        |           |       |
| MF 30 x 1,5  | 30,0 | 22,0 | 90  | 22 | 18,0 | 28,50 | 120301095 | 126,97 | 120302018 | 189,34 |           |       |
| MF 30 x 2,0  | 30,0 | 22,0 | 90  | 22 | 18,0 | 28,00 | 120301096 | 126,97 | 120302019 | 189,34 |           |       |
| MF 30 x 2,5  | 30,0 | 22,0 | 125 | 56 | 18,0 | 27,50 | 120301097 | 126,97 |           |        |           |       |
| MF 30 x 3,0  | 30,0 | 22,0 | 125 | 56 | 18,0 | 27,00 | 120301098 | 126,97 |           |        |           |       |
| MF 32 x 1    | 32,0 | 22,0 | 90  | 22 | 18,0 | 31,00 | 120301099 | 126,97 |           |        |           |       |
| MF 32 x 1,5  | 32,0 | 22,0 | 90  | 22 | 18,0 | 30,50 | 120301100 | 126,97 |           |        |           |       |
| MF 32 x 2,0  | 32,0 | 22,0 | 90  | 22 | 18,0 | 30,00 | 120301101 | 126,97 |           |        |           |       |
| MF 32 x 3,0  | 32,0 | 22,0 | 125 | 56 | 18,0 | 29,00 | 120301102 | 126,97 |           |        |           |       |
| MF 33 x 1,5  | 33,0 | 25,0 | 100 | 25 | 20,0 | 31,50 | 120301103 | 126,97 |           |        |           |       |
| MF 33 x 2,0  | 33,0 | 25,0 | 100 | 25 | 20,0 | 31,00 | 120301104 | 155,92 |           |        |           |       |
| MF 33 x 3,0  | 33,0 | 25,0 | 125 | 56 | 20,0 | 30,00 | 120301105 | 155,92 |           |        |           |       |
| MF 34 x 1    | 34,0 | 28,0 | 100 | 25 | 22,0 | 33,00 | 120301106 | 155,92 |           |        |           |       |
| MF 34 x 1,5  | 34,0 | 28,0 | 100 | 25 | 22,0 | 32,50 | 120301107 | 155,92 |           |        |           |       |
| MF 34 x 2,0  | 34,0 | 28,0 | 125 | 40 | 22,0 | 32,00 | 120301108 | 155,92 |           |        |           |       |
| MF 35 x 1    | 35,0 | 28,0 | 100 | 25 | 22,0 | 34,00 | 120301109 | 155,92 |           |        |           |       |
| MF 35 x 1,5  | 35,0 | 28,0 | 100 | 25 | 22,0 | 33,50 | 120301110 | 155,92 |           |        |           |       |
| MF 35 x 2    | 35,0 | 28,0 | 125 | 40 | 22,0 | 33,00 | 120301111 | 155,92 |           |        |           |       |
| MF 36 x 1    | 36,0 | 28,0 | 100 | 25 | 22,0 | 35,00 | 120301112 | 162,61 |           |        |           |       |
| MF 36 x 1,5  | 36,0 | 28,0 | 100 | 25 | 22,0 | 34,50 | 120301113 | 162,61 |           |        |           |       |
| MF 36 x 2,0  | 36,0 | 28,0 | 125 | 40 | 22,0 | 34,00 | 120301114 | 162,61 |           |        |           |       |
| MF 36 x 3,0  | 36,0 | 28,0 | 125 | 40 | 22,0 | 33,00 | 120301115 | 162,61 |           |        |           |       |
| MF 37 x 1,5  | 37,0 | 28,0 | 100 | 25 | 22,0 | 35,50 | 120301116 | 202,70 |           |        |           |       |
| MF 38 x 1    | 38,0 | 28,0 | 100 | 25 | 22,0 | 37,00 | 120301117 | 202,70 |           |        |           |       |
| MF 38 x 1,5  | 38,0 | 28,0 | 100 | 25 | 22,0 | 36,50 | 120301118 | 202,70 |           |        |           |       |
| MF 38 x 2    | 38,0 | 28,0 | 125 | 40 | 22,0 | 36,00 | 120301119 | 202,70 |           |        |           |       |
| MF 38 x 3    | 38,0 | 28,0 | 125 | 40 | 22,0 | 35,00 | 120301120 | 202,70 |           |        |           |       |



JOGOS DE MACHOS –MF HSS DIREITOS

**MF** Metric fine thread ISO DIN 13

Hand Tap Sets



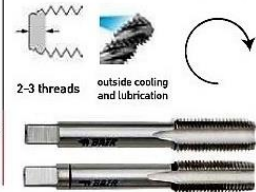
Shank: DIN 2181

Hand Tap Sets

for general use

through holes & blind holes up to 2 x D

material: HSSG ISO2/6H to 900 N/mm<sup>2</sup> 27.1 HRC



Chip removal (like picture)

outside cooling and lubrication

2-3 threads

Form C straight flutes

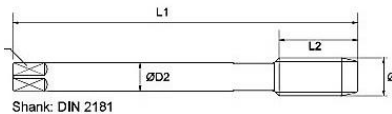
| MF          | D1   | D2   | L1  | L2 | □    | ⚙     | No.       | €       |
|-------------|------|------|-----|----|------|-------|-----------|---------|
| MF 39 x 1,5 | 39,0 | 32,0 | 110 | 25 | 24,0 | 37,50 | 120301121 | 202,70  |
| MF 39 x 2,0 | 39,0 | 32,0 | 125 | 40 | 24,0 | 37,00 | 120301122 | 202,70  |
| MF 39 x 3,0 | 39,0 | 32,0 | 125 | 40 | 24,0 | 36,00 | 120301123 | 202,70  |
| MF 40 x 1   | 40,0 | 32,0 | 110 | 25 | 24,0 | 39,00 | 120301124 | 202,70  |
| MF 40 x 1,5 | 40,0 | 32,0 | 110 | 25 | 24,0 | 38,50 | 120301125 | 202,70  |
| MF 40 x 2,0 | 40,0 | 32,0 | 125 | 40 | 24,0 | 38,00 | 120301126 | 202,70  |
| MF 40 x 3,0 | 40,0 | 32,0 | 125 | 40 | 24,0 | 37,00 | 120301127 | 202,70  |
| MF 42 x 1   | 42,0 | 32,0 | 110 | 25 | 24,0 | 41,00 | 120301128 | 202,70  |
| MF 42 x 1,5 | 42,0 | 32,0 | 110 | 25 | 24,0 | 40,50 | 120301129 | 202,70  |
| MF 42 x 2,0 | 42,0 | 32,0 | 125 | 40 | 24,0 | 40,00 | 120301130 | 211,63  |
| MF 42 x 3,0 | 42,0 | 32,0 | 125 | 40 | 24,0 | 39,00 | 120301131 | 211,63  |
| MF 44 x 1,5 | 44,0 | 36,0 | 110 | 25 | 29,0 | 42,50 | 120301132 | 238,35  |
| MF 44 x 2   | 44,0 | 36,0 | 125 | 40 | 29,0 | 42,00 | 120301133 | 238,35  |
| MF 45 x 1   | 45,0 | 36,0 | 110 | 25 | 29,0 | 44,00 | 120301134 | 238,35  |
| MF 45 x 1,5 | 45,0 | 36,0 | 110 | 25 | 29,0 | 43,50 | 120301135 | 238,35  |
| MF 45 x 2,0 | 45,0 | 36,0 | 125 | 40 | 29,0 | 43,00 | 120301136 | 238,35  |
| MF 45 x 3,0 | 45,0 | 36,0 | 125 | 40 | 29,0 | 42,00 | 120301137 | 238,35  |
| MF 46 x 1,5 | 46,0 | 36,0 | 140 | 40 | 29,0 | 45,50 | 120301138 | 238,35  |
| MF 48 x 1   | 48,0 | 36,0 | 140 | 40 | 29,0 | 47,00 | 120301139 | 285,13  |
| MF 48 x 1,5 | 48,0 | 36,0 | 140 | 40 | 29,0 | 46,50 | 120301140 | 285,13  |
| MF 48 x 2,0 | 48,0 | 36,0 | 140 | 40 | 29,0 | 46,00 | 120301141 | 285,13  |
| MF 48 x 3,0 | 48,0 | 36,0 | 140 | 40 | 29,0 | 45,00 | 120301142 | 285,13  |
| MF 50 x 1,5 | 50,0 | 36,0 | 140 | 40 | 29,0 | 48,50 | 120301143 | 311,84  |
| MF 50 x 2,0 | 50,0 | 36,0 | 140 | 40 | 29,0 | 48,00 | 120301144 | 311,84  |
| MF 50 x 3,0 | 50,0 | 36,0 | 140 | 40 | 29,0 | 47,00 | 120301145 | 311,84  |
| MF 52 x 1,5 | 52,0 | 40,0 | 140 | 40 | 32,0 | 50,50 | 120301146 | 374,22  |
| MF 52 x 2,0 | 52,0 | 40,0 | 140 | 40 | 32,0 | 50,00 | 120301147 | 374,22  |
| MF 52 x 3,0 | 52,0 | 40,0 | 140 | 40 | 32,0 | 49,00 | 120301148 | 374,22  |
| MF 54 x 1   | 54,0 | 40,0 | 140 | 32 | 32,0 | 53,00 | 120301149 | 405,40  |
| MF 54 x 1,5 | 54,0 | 40,0 | 140 | 32 | 32,0 | 52,50 | 120301150 | 405,40  |
| MF 54 x 2,0 | 54,0 | 40,0 | 140 | 36 | 32,0 | 52,00 | 120301151 | 405,40  |
| MF 54 x 3,0 | 54,0 | 40,0 | 140 | 40 | 32,0 | 51,00 | 120301152 | 405,40  |
| MF 54 x 4,0 | 54,0 | 40,0 | 180 | 50 | 32,0 | 50,00 | 120301153 | 405,40  |
| MF 55 x 1,5 | 55,0 | 40,0 | 140 | 32 | 32,0 | 53,50 | 120301154 | 463,30  |
| MF 55 x 2,0 | 55,0 | 40,0 | 140 | 36 | 32,0 | 53,00 | 120301155 | 463,30  |
| MF 55 x 3,0 | 55,0 | 40,0 | 140 | 40 | 32,0 | 52,00 | 120301156 | 463,30  |
| MF 55 x 4,0 | 55,0 | 40,0 | 180 | 50 | 32,0 | 51,00 | 120301157 | 463,30  |
| MF 56 x 1   | 56,0 | 40,0 | 140 | 32 | 32,0 | 55,00 | 120301158 | 514,56  |
| MF 56 x 1,5 | 56,0 | 40,0 | 140 | 32 | 32,0 | 54,50 | 120301159 | 521,22  |
| MF 56 x 2,0 | 56,0 | 40,0 | 140 | 36 | 32,0 | 54,00 | 120301160 | 521,22  |
| MF 56 x 3,0 | 56,0 | 40,0 | 140 | 40 | 32,0 | 53,00 | 120301161 | 521,22  |
| MF 56 x 4,0 | 56,0 | 40,0 | 180 | 50 | 32,0 | 52,00 | 120301162 | 521,22  |
| MF 58 x 1   | 58,0 | 45,0 | 160 | 32 | 35,0 | 57,00 | 120301163 | 556,87  |
| MF 58 x 1,5 | 58,0 | 45,0 | 160 | 32 | 35,0 | 56,50 | 120301164 | 530,15  |
| MF 58 x 2,0 | 58,0 | 45,0 | 160 | 36 | 35,0 | 56,00 | 120301165 | 530,15  |
| MF 58 x 3,0 | 58,0 | 45,0 | 160 | 40 | 35,0 | 55,00 | 120301166 | 530,15  |
| MF 58 x 4,0 | 58,0 | 45,0 | 200 | 55 | 35,0 | 54,00 | 120301167 | 530,15  |
| MF 60 x 1,5 | 60,0 | 45,0 | 160 | 34 | 35,0 | 58,50 | 120301168 | 554,66  |
| MF 60 x 2,0 | 60,0 | 45,0 | 160 | 36 | 35,0 | 58,00 | 120301169 | 554,66  |
| MF 60 x 3,0 | 60,0 | 45,0 | 160 | 40 | 35,0 | 57,00 | 120301170 | 554,66  |
| MF 60 x 4,0 | 60,0 | 45,0 | 200 | 55 | 35,0 | 56,00 | 120301171 | 554,66  |
| MF 62 x 1,5 | 62,0 | 50,0 | 160 | 34 | 39,0 | 60,50 | 120301172 | 634,87  |
| MF 62 x 2,0 | 62,0 | 50,0 | 160 | 36 | 39,0 | 60,00 | 120301173 | 634,87  |
| MF 62 x 3,0 | 62,0 | 50,0 | 180 | 45 | 39,0 | 59,00 | 120301174 | 634,87  |
| MF 62 x 4,0 | 62,0 | 50,0 | 220 | 55 | 39,0 | 58,00 | 120301175 | 634,87  |
| MF 63 x 1,5 | 63,0 | 50,0 | 160 | 32 | 39,0 | 61,50 | 120301176 | 652,68  |
| MF 64 x 1,5 | 64,0 | 50,0 | 160 | 34 | 39,0 | 62,50 | 120301177 | 652,68  |
| MF 64 x 2,0 | 64,0 | 50,0 | 160 | 36 | 39,0 | 62,00 | 120301178 | 652,68  |
| MF 64 x 3,0 | 64,0 | 50,0 | 180 | 45 | 39,0 | 61,00 | 120301179 | 652,68  |
| MF 64 x 4,0 | 64,0 | 50,0 | 220 | 60 | 39,0 | 60,00 | 120301180 | 663,80  |
| MF 65 x 1,5 | 65,0 | 50,0 | 160 | 34 | 39,0 | 63,50 | 120301181 | 690,50  |
| MF 65 x 2,0 | 65,0 | 50,0 | 160 | 36 | 39,0 | 63,00 | 120301182 | 690,50  |
| MF 65 x 3,0 | 65,0 | 50,0 | 180 | 45 | 39,0 | 62,00 | 120301183 | 690,50  |
| MF 65 x 4,0 | 65,0 | 50,0 | 220 | 60 | 39,0 | 61,00 | 120301184 | 690,50  |
| MF 68 x 1,5 | 68,0 | 50,0 | 160 | 36 | 39,0 | 66,50 | 120301185 | 712,80  |
| MF 68 x 2,0 | 68,0 | 50,0 | 160 | 40 | 39,0 | 66,00 | 120301186 | 712,80  |
| MF 68 x 3,0 | 68,0 | 50,0 | 180 | 50 | 39,0 | 65,00 | 120301187 | 712,80  |
| MF 68 x 4,0 | 68,0 | 50,0 | 220 | 60 | 39,0 | 64,00 | 120301188 | 712,80  |
| MF 70 x 1,5 | 70,0 | 50,0 | 160 | 36 | 39,0 | 68,50 | 120301189 | 1247,45 |
| MF 70 x 2,0 | 70,0 | 50,0 | 160 | 40 | 39,0 | 68,00 | 120301190 | 1247,45 |
| MF 70 x 3,0 | 70,0 | 50,0 | 200 | 50 | 39,0 | 67,00 | 120301191 | 1414,50 |
| MF 70 x 4,0 | 70,0 | 50,0 | 240 | 60 | 39,0 | 66,00 | 120301192 | 1414,50 |
| MF 72 x 1,5 | 72,0 | 50,0 | 160 | 36 | 39,0 | 70,50 | 120301193 | 1247,45 |
| MF 72 x 2,0 | 72,0 | 50,0 | 160 | 40 | 39,0 | 70,00 | 120301194 | 1247,45 |

OUTRAS CONFIGURAÇÕES – FAVOR CONSULTAR

JOGOS DE MACHOS –MF HSS DIREITOS

**MF** Metric fine thread ISO DIN 13

Hand Tap Sets



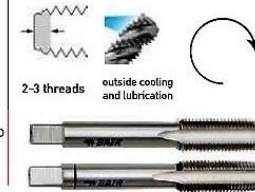
Shank: DIN 2181

Hand Tap Sets

for general use

through holes & blind holes up to 2 x D

material: HSSG ISO2/6H to 900 N/mm<sup>2</sup> 27.1 HRC



Chip removal (like picture)

outside cooling and lubrication

2-3 threads

Form C straight flutes

| MF          | D1   | D2   | L1  | L2 | □    | ⚙     | No.       | €       |
|-------------|------|------|-----|----|------|-------|-----------|---------|
| MF 72 x 3,0 | 72,0 | 50,0 | 200 | 50 | 39,0 | 69,00 | 120301195 | 1414,50 |
| MF 72 x 4,0 | 72,0 | 50,0 | 240 | 60 | 39,0 | 68,00 | 120301196 | 1414,50 |
| MF 74 x 1,5 | 74,0 | 50,0 | 160 | 36 | 39,0 | 72,50 | 120301197 | 1381,02 |
| MF 74 x 2,0 | 74,0 | 50,0 | 160 | 40 | 39,0 | 72,00 | 120301198 | 1381,02 |
| MF 74 x 3,0 | 74,0 | 50,0 | 200 | 50 | 39,0 | 71,00 | 120301199 | 1626,09 |
| MF 74 x 4,0 | 74,0 | 50,0 | 240 | 60 | 39,0 | 70,00 | 120301200 | 1626,09 |
| MF 75 x 1,5 | 75,0 | 50,0 | 160 | 36 | 39,0 | 73,50 | 120301201 | 1392,21 |
| MF 75 x 2,0 | 75,0 | 50,0 | 160 | 40 | 39,0 | 73,00 | 120301202 | 1392,21 |
| MF 75 x 3,0 | 75,0 | 50,0 | 200 | 50 | 39,0 | 72,00 | 120301203 | 1637,21 |
| MF 75 x 4,0 | 75,0 | 50,0 | 240 | 60 | 39,0 | 71,00 | 120301204 | 1637,21 |
| MF 76 x 1,5 | 76,0 | 50,0 | 160 | 36 | 39,0 | 74,50 | 120301205 | 1414,50 |
| MF 76 x 2,0 | 76,0 | 50,0 | 160 | 40 | 39,0 | 74,00 | 120301206 | 1414,50 |
| MF 76 x 3,0 | 76,0 | 50,0 | 220 | 50 | 39,0 | 73,00 | 120301207 | 1748,61 |
| MF 76 x 4,0 | 76,0 | 50,0 | 260 | 60 | 39,0 | 72,00 | 120301208 | 1748,61 |
| MF 78 x 1,5 | 78,0 | 50,0 | 160 | 36 | 39,0 | 76,50 | 120301209 | 1414,50 |
| MF 78 x 2,0 | 78,0 | 50,0 | 160 | 40 | 39,0 | 76,00 | 120301210 | 1414,50 |
| MF 78 x 3,0 | 78,0 | 50,0 | 220 | 55 | 39,0 | 75,00 | 120301211 | 1748,61 |
| MF 78 x 4,0 | 78,0 | 50,0 | 260 | 65 | 39,0 | 74,00 | 120301212 | 1748,61 |
| MF 80 x 1,5 | 80,0 | 50,0 | 160 | 36 | 39,0 | 78,50 | 120301213 | 1536,93 |
| MF 80 x 2,0 | 80,0 | 50,0 | 160 | 40 | 39,0 | 78,00 | 120301214 | 1536,93 |
| MF 80 x 3,0 | 80,0 | 50,0 | 220 | 55 | 39,0 | 77,00 | 120301215 | 1915,72 |
| MF 80 x 4,0 | 80,0 | 50,0 | 260 | 65 | 39,0 | 76,00 | 120301216 | 1915,72 |
| MF 82 x 1,5 | 82,0 | 50,0 | 160 | 36 | 39,0 | 80,50 | 120301217 | 1536,93 |
| MF 82 x 2,0 | 82,0 | 50,0 | 160 | 40 | 39,0 | 80,00 | 120301218 | 1536,93 |
| MF 82 x 3,0 | 82,0 | 50,0 | 220 | 55 | 39,0 | 79,00 | 120301219 | 1915,72 |
| MF 82 x 4,0 | 82,0 | 50,0 | 260 | 65 | 39,0 | 78,00 | 120301220 | 1915,72 |
| MF 84 x 1,5 | 84,0 | 50,0 | 160 | 36 | 39,0 | 82,50 | 120301221 | 1793,12 |
| MF 84 x 2,0 | 84,0 | 50,0 | 160 | 40 | 39,0 | 82,00 | 120301222 | 1793,12 |
| MF 84 x 3,0 | 84,0 | 50,0 | 220 | 55 | 39,0 | 81,00 | 120301223 | 2165,03 |
| MF 84 x 4,0 | 84,0 | 50,0 | 260 | 65 | 39,0 | 80,00 | 120301224 | 2165,03 |
| MF 85 x 1,5 | 85,0 | 50,0 | 160 | 36 | 39,0 | 83,50 | 120301225 | 2338,95 |
| MF 85 x 2,0 | 85,0 | 50,0 | 160 | 40 | 39,0 | 83,00 | 120301226 | 2338,95 |
| MF 85 x 3,0 | 85,0 | 50,0 | 220 | 55 | 39,0 | 82,00 | 120301227 | 2895,69 |
| MF 85 x 4,0 | 85,0 | 50,0 | 260 | 65 | 39,0 | 81,00 | 120301228 | 2895,69 |
| MF 86 x 1,5 | 86,0 | 50,0 | 160 | 36 | 39,0 | 84,50 | 120301229 | 2338,95 |
| MF 86 x 2,0 | 86,0 | 50,0 | 160 | 40 | 39,0 | 84,00 | 120301230 | 2338,95 |
| MF 86 x 3,0 | 86,0 | 50,0 | 220 | 55 | 39,0 | 83,00 | 120301231 | 2851,10 |
| MF 86 x 4,0 | 86,0 | 50,0 | 260 | 65 | 39,0 | 82,00 | 120301232 | 2851,10 |