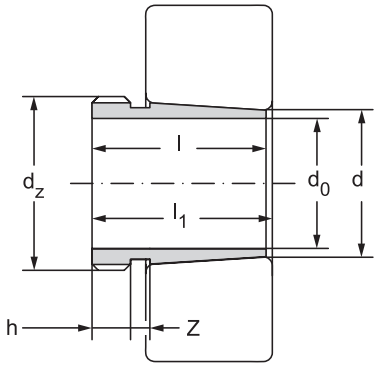
# Withdrawal sleeve d = 35 to 180 mm

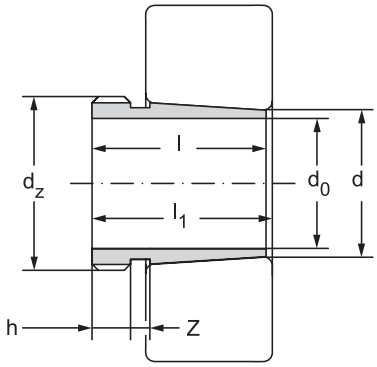





12.13.2

| Main dimensions | | | | | | |
|---|---|---|---|---|---|---|
| $d_0$ | d | $d_z$ | l | $l_1$ | h | z |
| mm | | | | | | |
| 35 | 40 | M45x1,5 | 30 | 32 | 6 | 5 |
| | 40 | M45x1,5 | 40 | 43 | 7 | 6 |
| | | | | | | |
| 40 | 45 | M50x1,5 | 32 | 34 | 6 | 6 |
| | 45 | M50x1,5 | 44 | 47 | 7 | 6 |
| | | | | | | |
| 45 | 50 | M55x2 | 35 | 38 | 7 | 6 |
| | 50 | M55x2 | 50 | 53 | 8 | 6 |
| | | | | | | |
| 50 | 55 | M60x2 | 37 | 40 | 7 | 6 |
| | 55 | M60x2 | 54 | 57 | 9 | 6 |
| | | | | | | |
| 55 | 60 | M65x2 | 40 | 43 | 8 | 7 |
| | 60 | M65x2 | 57 | 61 | 10 | 7 |
| | | | | | | |
| 60 | 65 | M75x2 | 42 | 45 | 8 | 7 |
| | 65 | M75x2 | 61 | 64 | 11 | 7 |
| | | | | | | |
| 65 | 70 | M80x2 | 44 | 47 | 8 | 7 |
| | 70 | M80x2 | 65 | 68 | 12 | 7 |
| | | | | | | |
| 70 | 75 | M85x2 | 46 | 49 | 8 | 7 |
| | 75 | M85x2 | 69 | 72 | 12 | 7 |
| | | | | | | |
| 75 | 80 | M90x2 | 48 | 52 | 8 | 7 |
| | 80 | M90x2 | 72 | 75 | 12 | 7 |
| | | | | | | |
| 80 | 85 | M95x2 | 52 | 56 | 9 | 7 |
| | 85 | M95x2 | 75 | 78 | 13 | 7 |
| | | | | | | |
| 85 | 90 | M100x2 | 53 | 57 | 9 | 7 |
| | 90 | M100x2 | 63 | 67 | 10 | 7 |
| | 90 | M100x2 | 80 | 83 | 14 | 7 |
| | | | | | | |
| 90 | 95 | M105x2 | 57 | 61 | 10 | 8 |
| | 95 | M105x2 | 85 | 89 | 15 | 8 |
| | | | | | | |
| 95 | 100 | M110x2 | 59 | 63 | 10 | 8 |
| | 100 | M110x2 | 75 | 77 | 12 | 7 |
| | 100 | M110x2 | 90 | 94 | 15 | 8 |

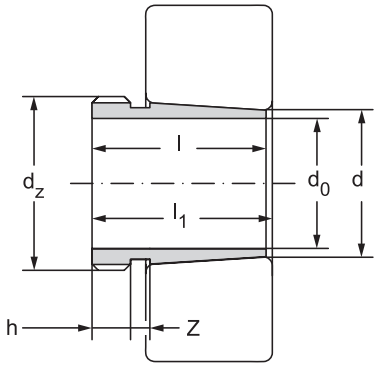
| Sleeve designation | Corresp. withdrawal nut | Weight |
|---|---|---|
| | | |
| | | kg |
| **AH308** | KM9 | 0,093 |
| **AH2308** | KM9 | 0,129 |
| | | |
| **AH309** | KM10 | 0,112 |
| **AH2309** | KM10 | 0,163 |
| | | |
| **AH310X** | KM11 | 0,138 |
| **AH2310X** | KM11 | 0,236 |
| | | |
| **AH311X** | KM12 | 0,162 |
| **AH2311X** | KM12 | 0,257 |
| | | |
| **AH312X** | KM13 | 0,194 |
| **AH2312X** | KM13 | 0,299 |
| | | |
| **AH313** | KM15 | 0,256 |
| **AH2313** | KM15 | 0,399 |
| | | |
| **AH314** | KM16 | 0,29 |
| **AH2314X** | KM16 | 0,466 |
| | | |
| **AH315** | KM17 | 0,326 |
| **AH2315X** | KM17 | 0,536 |
| | | |
| **AH316** | KM18 | 0,367 |
| **AH2316X** | KM18 | 0,602 |
| | | |
| **AH317X** | KM19 | 0,431 |
| **AH2317X** | KM19 | 0,676 |
| | | |
| **AH318X** | KM20 | 0,465 |
| **AH3218X** | KM20 | 0,578 |
| **AH2318X** | KM20 | 0,777 |
| | | |
| **AH319X** | KM21 | 0,537 |
| **AH2319X** | KM21 | 0,888 |
| | | |
| **AH320X** | KM22 | 0,586 |
| **AH3220X** | KM22 | 0,768 |
| **AH2320X** | KM22 | 1 |




12.13.2

| Main dimensions | | | | | | |
|---|---|---|---|---|---|---|
| $d_0$ | d | $d_z$ | l | $l_1$ | h | z |
| mm | | | | | | |
| 100 | 110 | M125x2 | 68 | 72 | 11 | 8 |
| 105 | 110 | M120x2 | 68 | 72 | 11 | 8 |
| | 110 | M125x2 | 82 | 86 | 12 | 8 |
| | 110 | M125x2 | 98 | 102 | 16 | 8 |
| 110 | 120 | M140x2 | 75 | 79 | 12 | 8 |
| | 120 | M140x2 | 105 | 109 | 17 | 8 |
| 115 | 120 | M130x2 | 60 | 64 | 13 | 8 |
| | 120 | M130x2 | 75 | 79 | 12 | 8 |
| | 120 | M135x2 | 90 | 94 | 14 | 8 |
| | 120 | M135x2 | 105 | 109 | 17 | 8 |
| 125 | 130 | M140x2 | 67 | 71 | 14 | 8 |
| | 130 | M140x2 | 78 | 82 | 12 | 8 |
| | 130 | M145x2 | 98 | 102 | 15 | 8 |
| | 130 | M145x2 | 115 | 119 | 19 | 8 |
| 135 | 140 | M150x2 | 68 | 73 | 14 | 10 |
| | 140 | M150x2 | 83 | 88 | 14 | 10 |
| | 140 | M155x3 | 104 | 109 | 15 | 10 |
| | 140 | M155x3 | 125 | 130 | 20 | 10 |
| 145 | 150 | M160x3 | 72 | 77 | 15 | 10 |
| | 150 | M165x3 | 96 | 101 | 15 | 10 |
| | 150 | M165x3 | 114 | 119 | 18 | 10 |
| | 150 | M165x3 | 135 | 140 | 24 | 10 |
| 150 | 160 | M170x3 | 77 | 82 | 16 | 10 |
| | 160 | M180x3 | 103 | 108 | 16 | 10 |
| | 160 | M180x3 | 124 | 130 | 20 | 12 |
| | 160 | M180x3 | 140 | 146 | 24 | 12 |
| 160 | 170 | M180x3 | 85 | 90 | 17 | 10 |
| | 170 | M190x3 | 104 | 109 | 16 | 10 |
| | 170 | M190x3 | 134 | 140 | 24 | 12 |
| | 170 | M190x3 | 146 | 152 | 24 | 12 |

| Sleeve designation | Corresp. withdrawal nut | Weight |
|---|---|---|
| | | |
| | | kg |
| **AH3122** | KM25 | 1,28 |
| | | |
| **AH3122X** | KM24 | 0,786 |
| **AH3222X** | KM25 | 1,06 |
| **AH2322X** | KM25 | 1,35 |
| | | |
| **AH3124** | KM28 | 1,67 |
| **AH2324** | KM28 | 2,47 |
| | | |
| **AH3024X** | KM26 | 0,737 |
| **AH3124X** | KM26 | 0,948 |
| **AH3224X** | KM27 | 1,31 |
| **AH2324X** | KM27 | 1,61 |
| | | |
| **AH3026X** | KM28 | 0,907 |
| **AH3126X** | KM28 | 1,08 |
| **AH3226X** | KM29 | 1,58 |
| **AH2326X** | KM29 | 1,97 |
| | | |
| **AH3028X** | KM30 | 0,996 |
| **AH3128X** | KM30 | 1,26 |
| **AH3228X** | KM31 | 1,81 |
| **AH2328X** | KM31 | 2,34 |
| | | |
| **AH3030X** | KM32 | 1,12 |
| **AH3130X** | KM33 | 1,75 |
| **AH3230X** | KM33 | 2,21 |
| **AH2330X** | KM33 | 0 |
| | | |
| **AH3032** | KM34 | 2,01 |
| **AH3132** | KM36 | 3,18 |
| **AH3232** | KM36 | 4,02 |
| **AH2332** | KM36 | 4,69 |
| | | |
| **AH3034** | KM36 | 2,4 |
| **AH3134** | KM38 | 3,41 |
| **AH3234** | KM38 | 3,41 |
| **AH2334** | KM38 | 5,23 |

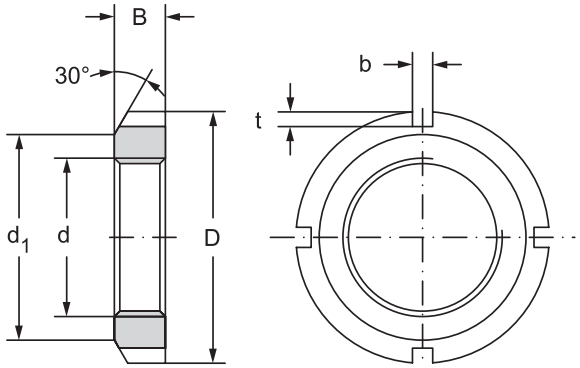



12.13.2

| Main dimensions | | | | | | |
|---|---|---|---|---|---|---|
| $d_0$ | d | $d_z$ | l | $l_1$ | h | z |
| mm | | | | | | |
| 170 | 180 | M190x3 | 92 | 98 | 17 | 12 |
| | 180 | M200x3 | 116 | 122 | 19 | 12 |
| | 180 | M200x3 | 105 | 110 | 17 | 10 |
| | 180 | M200x3 | 140 | 146 | 24 | 12 |
| | 180 | M200x3 | 154 | 160 | 26 | 12 |
| | | | | | | |
| 180 | 190 | Tr205x4 | 96 | 102 | 17 | 12 |
| | 190 | Tr210x4 | 125 | 131 | 19 | 12 |
| | 190 | Tr210x4 | 112 | 117 | 18 | 10 |
| | 190 | Tr210x4 | 160 | 167 | 26 | 14 |
| | 190 | Tr210x4 | 145 | 152 | 25 | 14 |

| Sleeve designation | Corresp. withdrawal nut | Weight |
|---|---|---|
| | | |
| | | kg |
| **AH3036** | KM38 | 2,8 |
| **AH3136** | KM40 | 4,16 |
| **AH2236** | KM40 | 3,67 |
| **AH3236** | KM40 | 5,29 |
| **AH2336** | KM40 | 5,94 |
| | | |
| **AH3038** | HML41T | 3,28 |
| **AH3138** | HM42T | 4,73 |
| **AH2238** | HM42T | 4,15 |
| **AH2338** | HM42T | 6,53 |
| **AH3238** | HM42T | 5,8 |

## Adapter and withdawal round nuts

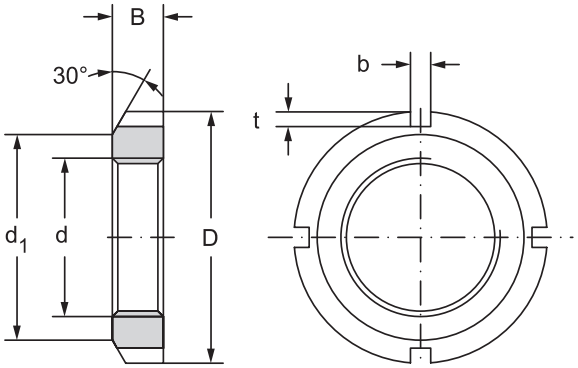



12.13.3

| Main dimensions | | | | | |
|---|---|---|---|---|---|
| d | d | $d_1$ | B | b | t |
| mm | | | | | |
| M10x0,75 | 18 | 13,5 | 4 | 3 | 2 |
| M12x1 | 22 | 17 | 4 | 3 | 2 |
| M15x1 | 25 | 21 | 5 | 4 | 2 |
| M17x1 | 28 | 24 | 5 | 4 | 2 |
| M20x1 | 32 | 26 | 6 | 4 | 2 |
| M25x1,5 | 38 | 32 | 7 | 5 | 2 |
| M30x1,5 | 45 | 38 | 7 | 5 | 2 |
| M35x1,5 | 52 | 44 | 8 | 5 | 2 |
| M40x1,5 | 58 | 50 | 9 | 6 | 2,5 |
| M45x1,5 | 65 | 56 | 10 | 6 | 2,5 |
| M50x1,5 | 70 | 61 | 11 | 6 | 2,5 |
| M55x2 | 75 | 67 | 11 | 7 | 3 |
| M60x2 | 80 | 73 | 11 | 7 | 3 |
| M65x2 | 85 | 79 | 12 | 7 | 3 |
| M70x2 | 92 | 85 | 12 | 8 | 3,5 |
| M75x2 | 98 | 90 | 13 | 8 | 3,5 |
| M80x2 | 105 | 95 | 15 | 8 | 3,5 |
| M85x2 | 110 | 102 | 16 | 8 | 3,5 |
| M90x2 | 120 | 108 | 16 | 10 | 4 |
| M95x2 | 125 | 113 | 17 | 10 | 4 |
| M100x2 | 130 | 120 | 18 | 10 | 4 |

| Nut designation | | Corresp. locking washer | Weight |
|---|---|---|---|
| KM | KMA | | |
| | | | kg |
| KM0 | MB0 | | 0,004 |
| KM1 | MB1 | | 0,007 |
| KM2 | MB2 | | 0,01 |
| KM3 | MB3 | | 0,013 |
| KM4 | MB4 | | 0,019 |
| KM5 | KMA5 | MB5 | 0,025 |
| KM6 | KMA6 | MB6 | 0,043 |
| KM7 | KMA7 | MB7 | 0,053 |
| KM8 | KMA8 | MB8 | 0,085 |
| KM9 | KMA9 | MB9 | 0,12 |
| KM10 | KMA10 | MB10 | 0,15 |
| KM11 | KMA11 | MB11 | 0,16 |
| KM12 | KMA12 | MB12 | 0,17 |
| KM13 | KMA13 | MB13 | 0,2 |
| KM14 | KMA14 | MB14 | 0,24 |
| KM15 | KMA15 | MB15 | 0,29 |
| KM16 | KMA16 | MB16 | 0,4 |
| KM17 | KMA17 | MB17 | 0,45 |
| KM18 | KMA18 | MB18 | 0,56 |
| KM19 | MB19 | | 0,66 |
| KM20 | KMA20 | MB20 | 0,7 |

## Adapter and withdrawal round nuts




12.13.3

| Main dimensions | | | | | |
|---|---|---|---|---|---|
| d | d | $d_1$ | B | b | t |
| mm | | | | | |
| M105x2 | 140 | 126 | 18 | 12 | 5 |
| M110x2 | 145 | 133 | 19 | 12 | 5 |
| M115x2 | 150 | 137 | 19 | 12 | 5 |
| M120x2 | 155 | 138 | 20 | 12 | 5 |
| M125x2 | 160 | 148 | 21 | 12 | 5 |
| M130x2 | 165 | 149 | 21 | 12 | 6 |
| M135x2 | 175 | 160 | 22 | 14 | 6 |
| M140x2 | 180 | 160 | 22 | 14 | 6 |
| M150x2 | 195 | 171 | 24 | 14 | 6 |
| M160x3 | 210 | 182 | 25 | 16 | 7 |
| M170x3 | 220 | 193 | 26 | 16 | 7 |
| M180x3 | 230 | 203 | 27 | 18 | 8 |
| M190x3 | 240 | 214 | 28 | 18 | 8 |
| M200x3 | 250 | 226 | 29 | 18 | 8 |

| Nut designation | | Corresp. locking washer | Weight |
|---|---|---|---|
| KM | KMA | | |
| | | | kg |
| KM21 | KMA21 | MB21 | 0,84 |
| KM22 | KMA22 | MB22 | 0,97 |
| KM23 | MB23 | | 1,01 |
| KM24 | KMA24 | MB24 | 1,08 |
| KM25 | KMA25 | MB25 | 1,19 |
| KM26 | KMA26 | MB26 | 1,25 |
| KM27 | MB27 | | 1,55 |
| KM28 | MB28 | | 1,6 |
| KM30 | MB30 | | 2,03 |
| KM32 | MB32 | | 2,59 |
| KM34 | MB34 | | 2,8 |
| KM36 | MB36 | | 3,07 |
| KM38 | MB38 | | 3,39 |
| KM40 | MB40 | | 3,69 |