

# ETP HYDRO-GRIP® PENCIL

## Features and benefits

- For drilling to finishing
- Pencil design enabling machining in deep cavities and complex components
- Special designs possibility

**PENCIL  
DESIGN**

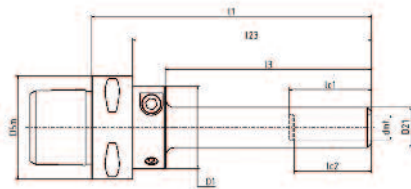


## Hydraulic high precision toolholder – Pencil version

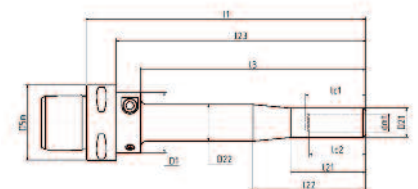
ETP HYDRO-GRIP® PENCIL is with its extreme slim design one of the most versatile holder on the market. An extensive range of

standard dimensions and lengths optimizes your productivity when machining deep cavities and complex components.

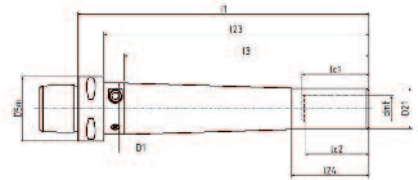
ETP HYDRO-GRIP® PENCIL can also be made to your specific gauge line requirement, using our Special designs possibility.



PSK form design 1



PSK form design 2



PSK form design 3

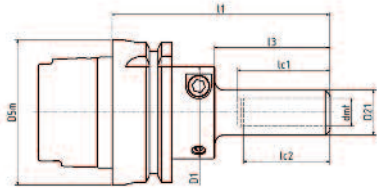
# ETP HYDRO-GRIP® PENCIL

## Hydraulic high precision toolholder – Pencil version

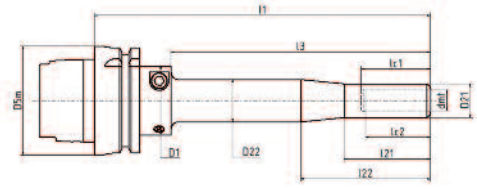
### Technical Specification PSK form

| Design | Coupling size | Ordering code       | Dimensions, mm |        |       |          |          |          |          |       |       |          |          |          |          |
|--------|---------------|---------------------|----------------|--------|-------|----------|----------|----------|----------|-------|-------|----------|----------|----------|----------|
|        |               |                     | $D_{5m}$       | $dm_t$ | $D_1$ | $D_{21}$ | $D_{22}$ | $l_{c1}$ | $l_{c2}$ | $l_1$ | $l_3$ | $l_{21}$ | $l_{22}$ | $l_{23}$ | $l_{24}$ |
| ● 1    | C4            | HG PENCIL-6x50/C4   | 40             | 6      | 40    | 12       |          | 40       | 37       | 88    | 50    |          |          |          |          |
| ○ 1    |               | HG PENCIL-8x50/C4   | 40             | 8      | 40    | 14,5     |          | 40       | 37       | 100   | 50    |          |          |          |          |
| ○ 1    |               | HG PENCIL-10x50/C4  | 40             | 10     | 40    | 17       |          | 40       | 37       | 100   | 50    |          |          |          |          |
| ○ 1    |               | HG PENCIL-10x100/C4 | 40             | 10     | 40    | 17       |          | 40       | 37       | 150   | 100   |          |          |          |          |
| ● 1    |               | HG PENCIL-12x50/C4  | 40             | 12     | 40    | 19,5     |          | 40       | 37       | 88    | 50    |          |          |          |          |
| ● 1    |               | HG PENCIL-12x100/C4 | 40             | 12     | 40    | 19,5     |          | 40       | 37       | 138   | 100   |          |          |          |          |
| ● 2    |               | HG PENCIL-12x150/C4 | 40             | 12     | 40    | 19,5     |          | 40       | 37       | 188   | 150   | 50       | 75       |          |          |
| ● 1    | C5            | HG PENCIL-6x50/C5   | 50             | 6      | 40    | 12       |          | 40       | 37       | 88    | 50    |          |          | 68       |          |
| ○ 1    |               | HG PENCIL-8x50/C5   | 50             | 8      | 40    | 14,5     |          | 40       | 37       | 88    | 50    |          |          | 68       |          |
| ○ 1    |               | HG PENCIL-10x50/C5  | 50             | 10     | 40    | 17       |          | 40       | 37       | 88    | 50    |          |          | 68       |          |
| ○ 1    |               | HG PENCIL-10x100/C5 | 50             | 10     | 40    | 19,5     |          | 40       | 37       | 138   | 100   |          |          | 118      |          |
| ● 1    |               | HG PENCIL-12x50/C5  | 50             | 12     | 40    | 19,5     |          | 40       | 37       | 88    | 50    |          |          | 68       |          |
| ● 1    |               | HG PENCIL-12x100/C5 | 50             | 12     | 40    | 19,5     |          | 40       | 37       | 138   | 100   |          |          | 118      |          |
| ● 2    |               | HG PENCIL-12x150/C5 | 50             | 12     | 40    | 19,5     | 24,5     | 40       | 37       | 188   | 150   | 50       | 75       | 168      |          |
| ○ 1    |               | HG PENCIL-16x75/C5  | 50             | 16     | 40    | 26       |          | 50       | 47       | 113   | 75    |          |          | 93       |          |
| ○ 1    |               | HG PENCIL-16x125/C5 | 50             | 16     | 40    | 26       |          | 50       | 47       | 163   | 125   |          |          | 143      |          |
| ● 3    |               | HG PENCIL-20x110/C5 | 50             | 20     | 40    | 32       |          | 52       | 49       | 148   | 110   |          |          | 140      | 60       |
| ● 3    |               | HG PENCIL-20x190/C5 | 50             | 20     | 40    | 32       |          | 52       | 49       | 228   | 190   |          |          | 220      | 60       |
| ● 1    | C6            | HG PENCIL-6x50/C6   | 63             | 6      | 40    | 12       |          | 40       | 37       | 90    | 50    |          |          | 68       |          |
| ○ 1    |               | HG PENCIL-8x50/C6   | 63             | 8      | 40    | 14,5     |          | 40       | 37       | 90    | 50    |          |          | 68       |          |
| ○ 1    |               | HG PENCIL-10x50/C6  | 63             | 10     | 40    | 17       |          | 40       | 37       | 90    | 50    |          |          | 68       |          |
| ○ 1    |               | HG PENCIL-10x100/C6 | 63             | 10     | 40    | 17       |          | 40       | 37       | 90    | 100   |          |          | 68       |          |
| ● 1    |               | HG PENCIL-12x50/C6  | 63             | 12     | 40    | 19,5     |          | 40       | 37       | 90    | 50    |          |          | 72       |          |
| ● 1    |               | HG PENCIL-12x100/C6 | 63             | 12     | 40    | 19,5     |          | 40       | 37       | 132   | 100   |          |          | 122      |          |
| ● 2    |               | HG PENCIL-12x150/C6 | 63             | 12     | 40    | 19,5     | 24,5     | 40       | 37       | 182   | 150   | 50       | 75       | 172      |          |
| ○ 1    |               | HG PENCIL-16x75/C6  | 63             | 16     | 40    | 26       |          | 50       | 47       | 115   | 75    |          |          | 93       |          |
| ○ 1    |               | HG PENCIL-16x125/C6 | 63             | 16     | 40    | 26       |          | 50       | 47       | 165   | 125   |          |          | 143      |          |
| ● 3    |               | HG PENCIL-20x110/C6 | 63             | 20     | 40    | 32       |          | 52       | 49       | 150   | 110   |          |          | 132      | 60       |
| ● 3    |               | HG PENCIL-20x190/C6 | 63             | 20     | 40    | 32       |          | 52       | 49       | 230   | 190   |          |          | 212      | 60       |
| ○ 1    | C8            | HG PENCIL-10x50/C8  | 80             | 10     | 40    | 17       |          | 40       | 37       | 102   | 50    |          |          | 72       |          |
| ○ 1    |               | HG PENCIL-10x100/C8 | 80             | 10     | 40    | 17       |          | 40       | 37       | 152   | 100   |          |          | 122      |          |
| ● 1    |               | HG PENCIL-12x50/C8  | 80             | 12     | 40    | 19,5     |          | 40       | 37       | 102   | 50    |          |          | 72       |          |
| ● 1    |               | HG PENCIL-12x100/C8 | 80             | 12     | 40    | 19,5     |          | 40       | 37       | 152   | 100   |          |          | 122      |          |
| ● 2    |               | HG PENCIL-12x150/C8 | 80             | 12     | 40    | 19,5     | 24,5     | 40       | 37       | 202   | 150   | 50       | 75       | 172      |          |
| ○ 1    |               | HG PENCIL-16x75/C8  | 80             | 16     | 40    | 26       |          | 50       | 47       | 127   | 75    |          |          | 97       |          |
| ○ 1    |               | HG PENCIL-16x125/C8 | 80             | 16     | 40    | 26       |          | 50       | 47       | 177   | 125   |          |          | 147      |          |
| ● 3    |               | HG PENCIL-20x110/C8 | 80             | 20     | 40    | 32       |          | 52       | 49       | 162   | 110   |          |          | 132      | 60       |
| ● 3    |               | HG PENCIL-20x190/C8 | 80             | 20     | 40    | 32       |          | 52       | 49       | 242   | 190   |          |          | 212      | 60       |

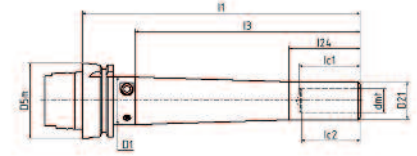
$l_1$  = programming length



HSK form design 1



HSK form design 2



HSK form design 3

# ETP HYDRO-GRIP® PENCIL

## Hydraulic high precision toolholder – Pencil version

### Technical Specification HSK form A/C

| Design | HSK size | Ordering code           | Dimensions, mm |        |       |          |          |       |       |          |          |          |          |          |    |
|--------|----------|-------------------------|----------------|--------|-------|----------|----------|-------|-------|----------|----------|----------|----------|----------|----|
|        |          |                         | $D_{5m}$       | $dm_t$ | $D_1$ | $D_{21}$ | $D_{22}$ | $l_1$ | $l_3$ | $l_{21}$ | $l_{22}$ | $l_{24}$ | $l_{c1}$ | $l_{c2}$ |    |
| ● 1    | 63       | HG PENCIL-6x50/HSK63    | 63             | 6      | 40    | 12       |          | 96,5  | 50    |          |          |          |          | 40       | 37 |
| ○ 1    |          | HG PENCIL-8x50/HSK63    | 63             | 8      | 40    | 14,6     |          | 96,5  | 50    |          |          |          |          | 40       | 37 |
| ○ 1    |          | HG PENCIL-10x50/HSK63   | 63             | 10     | 40    | 17       |          | 96,5  | 50    |          |          |          |          | 40       | 37 |
| ○ 1    |          | HG PENCIL-10x100/HSK63  | 63             | 10     | 40    | 17       |          | 146,5 | 100   |          |          |          |          | 40       | 37 |
| ● 1    |          | HG PENCIL-12x50/HSK63   | 63             | 12     | 40    | 19,5     |          | 96,5  | 50    |          |          |          |          | 40       | 37 |
| ● 1    |          | HG PENCIL-12x100/HSK63  | 63             | 12     | 40    | 19,5     |          | 146,5 | 100   |          |          |          |          | 40       | 37 |
| ● 2    |          | HG PENCIL-12x150/HSK63  | 63             | 12     | 40    | 19,5     | 24,5     | 196,5 | 150   | 50       | 75       |          |          | 40       | 37 |
| ○ 1    |          | HG PENCIL-16x75/HSK63   | 63             | 16     | 40    | 26       |          | 121,5 | 75    |          |          |          |          | 50       | 47 |
| ○ 1    |          | HG PENCIL-16x125/HSK63  | 63             | 16     | 40    | 26       |          | 171,5 | 125   |          |          |          |          | 50       | 47 |
| ● 3    |          | HG PENCIL-20x110/HSK63  | 63             | 20     | 40    | 32       |          | 156,5 | 110   |          |          | 60       |          | 52       | 49 |
| ● 3    |          | HG PENCIL-20x190/HSK63  | 63             | 20     | 40    | 32       |          | 236,5 | 190   |          |          | 60       |          | 52       | 49 |
| ○ 1    | 100      | HG PENCIL-10x50/HSK100  | 100            | 10     | 40    | 17       |          | 102   | 50    |          |          |          |          | 40       | 37 |
| ○ 1    |          | HG PENCIL-10x100/HSK100 | 100            | 10     | 40    | 17       |          | 152   | 100   |          |          |          |          | 40       | 37 |
| ● 1    |          | HG PENCIL-12x50/HSK100  | 100            | 12     | 40    | 19,5     |          | 117   | 50    |          |          |          |          | 40       | 37 |
| ● 1    |          | HG PENCIL-12x100/HSK100 | 100            | 12     | 40    | 19,5     |          | 167   | 100   |          |          |          |          | 40       | 37 |
| ● 2    |          | HG PENCIL-12x150/HSK100 | 100            | 12     | 40    | 19,5     | 24,5     | 217   | 150   | 50       | 75       |          |          | 40       | 37 |
| ○ 1    |          | HG PENCIL-16x75/HSK100  | 100            | 16     | 40    | 26       |          | 127   | 75    |          |          |          |          | 50       | 47 |
| ○ 1    |          | HG PENCIL-16x125/HSK100 | 100            | 16     | 40    | 26       |          | 177   | 125   |          |          |          |          | 50       | 47 |
| ○ 3    |          | HG PENCIL-20x110/HSK100 | 100            | 20     | 40    | 32       |          | 162   | 110   |          |          | 60       |          | 52       | 49 |
| ○ 3    |          | HG PENCIL-20x190/HSK100 | 100            | 20     | 40    | 32       |          | 242   | 190   |          |          | 60       |          | 52       | 49 |

### Technical Specification HSK form E

| Design | HSK size | Ordering code          | Dimensions, mm |        |       |          |          |       |       |          |          |          |          |    |    |
|--------|----------|------------------------|----------------|--------|-------|----------|----------|-------|-------|----------|----------|----------|----------|----|----|
|        |          |                        | $D_{5m}$       | $dm_t$ | $D_1$ | $D_{21}$ | $D_{22}$ | $l_1$ | $l_3$ | $l_{21}$ | $l_{22}$ | $l_{c1}$ | $l_{c2}$ |    |    |
| ○ 1    | 50       | HG PENCIL-6x50/HSK50   | 50             | 6      | 40    | 12       |          | 94    | 50    |          |          |          |          | 40 | 37 |
| ○ 1    |          | HG PENCIL-8x50/HSK50   | 50             | 8      | 40    | 14,5     |          | 94    | 50    |          |          |          |          | 40 | 37 |
| ○ 1    |          | HG PENCIL-10x50/HSK50  | 50             | 10     | 40    | 17       |          | 94    | 50    |          |          |          |          | 40 | 37 |
| ○ 1    |          | HG PENCIL-10x100/HSK50 | 50             | 10     | 40    | 17       |          | 144   | 100   |          |          |          |          | 40 | 37 |
| ○ 1    |          | HG PENCIL-12x50/HSK50  | 50             | 12     | 40    | 19,5     |          | 94    | 50    |          |          |          |          | 40 | 37 |
| ○ 1    |          | HG PENCIL-12x100/HSK50 | 50             | 12     | 40    | 19,5     |          | 144   | 100   |          |          |          |          | 40 | 37 |
| ○ 2    |          | HG PENCIL-12x150/HSK50 | 50             | 12     | 40    | 19,5     | 24,5     | 194   | 150   | 50       | 75       |          |          | 40 | 37 |

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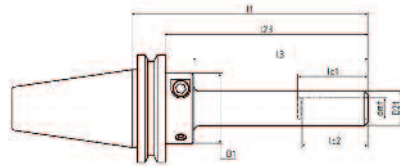
## Cylindrical shank



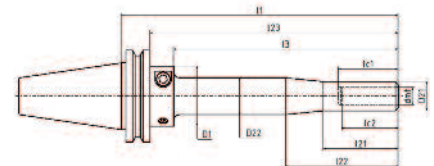
### Technical Specification

| Ordering code       | Dimensions, mm/inch |        |       |       |
|---------------------|---------------------|--------|-------|-------|
|                     | $dm_m$              | $dm_t$ | $l_c$ | $l_1$ |
| ● HG PENCIL-12/Rd20 | 20                  | 12     | 40    | 150   |

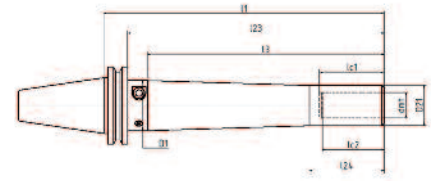
$l_1$  = programming length



ISO form design 1



ISO form design 2



ISO form design 3

# ETP HYDRO-GRIP® PENCIL

## Hydraulic high precision toolholder – Pencil version

### Technical Specification ISO form A

| Design | Spindle design | Taper | Ordering code          | Dimensions |       |          |          |       |       |          |          |          |          |          |          |    |
|--------|----------------|-------|------------------------|------------|-------|----------|----------|-------|-------|----------|----------|----------|----------|----------|----------|----|
|        |                |       |                        | $dm_t$     | $D_1$ | $D_{21}$ | $D_{22}$ | $l_1$ | $l_3$ | $l_{21}$ | $l_{22}$ | $l_{23}$ | $l_{24}$ | $l_{c1}$ | $l_{c2}$ |    |
| 1      | ISO7388/1      | ISO40 | HG PENCIL-6x50/ISO40   | 6          | 40    | 12       |          | 87    | 50    |          |          |          | 67,9     |          | 40       | 37 |
| 1      |                |       | HG PENCIL-8x50/ISO40   | 8          | 40    | 14,5     |          | 87    | 50    |          |          |          | 67,9     |          | 40       | 37 |
| 1      |                |       | HG PENCIL-10x50/ISO40  | 10         | 40    | 17       |          | 87    | 50    |          |          |          | 67,9     |          | 40       | 37 |
| 1      |                |       | HG PENCIL-10x100/ISO40 | 10         | 40    | 17       |          | 137   | 100   |          |          |          | 117,9    |          | 40       | 37 |
| 1      |                |       | HG PENCIL-12x50/ISO40  | 12         | 40    | 19,5     |          | 87    | 50    |          |          |          | 67,9     |          | 40       | 37 |
| 1      |                |       | HG PENCIL-12x100/ISO40 | 12         | 40    | 19,5     |          | 137   | 100   |          |          |          | 117,9    |          | 40       | 37 |
| 2      |                |       | HG PENCIL-12x150/ISO40 | 12         | 40    | 19,5     | 24,5     | 187   | 150   | 50       | 75       | 167,9    |          | 40       | 37       |    |
| 1      |                |       | HG PENCIL-16x75/ISO40  | 16         | 40    |          |          | 112   | 75    |          |          |          | 92,9     |          | 50       | 47 |
| 1      |                |       | HG PENCIL-16x125/ISO40 | 16         | 40    |          |          | 162   | 125   |          |          |          | 142,9    |          | 50       | 47 |
| 3      |                |       | HG PENCIL-20x110/ISO40 | 20         | 40    | 32       |          | 147   | 110   |          |          |          | 127,9    | 60       | 52       | 49 |
| 3      |                |       | HG PENCIL-20x190/ISO40 | 20         | 40    | 32       |          | 227   | 190   |          |          |          | 207,9    | 60       | 52       | 49 |
| 1      | MAS-BT403      | ISO30 | HG PENCIL-6x50/BT30    | 6          | 40    | 12       |          | 90    | 50    |          |          |          | 68       |          | 40       | 37 |
| 1      |                |       | HG PENCIL-8x50/BT30    | 8          | 40    | 14,5     |          | 90    | 50    |          |          |          | 68       |          | 40       | 37 |
| 1      |                |       | HG PENCIL-10x50/BT30   | 10         | 40    | 17       |          | 90    | 50    |          |          |          | 68       |          | 40       | 37 |
| 1      |                |       | HG PENCIL-10x100/BT30  | 10         | 40    | 17       |          | 140   | 100   |          |          |          | 118      |          | 40       | 37 |
| 1      |                |       | HG PENCIL-12x50/BT30   | 12         | 40    | 19,5     |          | 87    | 50    |          |          |          | 68       |          | 40       | 37 |
| 1      |                |       | HG PENCIL-12x100/BT30  | 12         | 40    | 19,5     |          | 140   | 100   |          |          |          | 118      |          | 40       | 37 |
| 2      |                |       | HG PENCIL-12x150/BT30  | 12         | 40    | 19,5     | 24,5     | 190   | 150   | 50       | 75       | 168      |          | 40       | 37       |    |
| 1      | MAS-BT403      | ISO40 | HG PENCIL-6x50/BT40    | 6          | 40    | 12       |          | 95    | 50    |          |          |          | 68       |          | 40       | 37 |
| 1      |                |       | HG PENCIL-8x50/BT40    | 8          | 40    | 14,5     |          | 95    | 50    |          |          |          | 68       |          | 40       | 37 |
| 3      |                |       | HG PENCIL-10x50/BT40   | 10         | 40    | 17       |          | 95    | 50    |          |          |          | 68       |          | 40       | 37 |
| 3      |                |       | HG PENCIL-10x100/BT40  | 10         | 40    | 17       |          | 145   | 100   |          |          |          | 118      |          | 40       | 37 |
|        |                |       | HG PENCIL-12x50/BT40   | 12         | 40    | 19,5     |          | 95    | 50    |          |          |          | 68       |          | 40       | 37 |
| 1      |                |       | HG PENCIL-12x100/BT40  | 12         | 40    | 19,5     |          | 145   | 100   |          |          |          | 118      |          | 40       | 37 |
| 1      |                |       | HG PENCIL-12x150/BT40  | 12         | 40    | 19,5     | 24,5     | 195   | 150   | 50       | 75       | 168      |          | 40       | 37       |    |
| 1      |                |       | HG PENCIL-16x75/BT40   | 16         | 40    | 26       |          | 120   | 75    |          |          |          | 93       |          | 50       | 47 |
| 2      |                |       | HG PENCIL-16x125/BT40  | 16         | 40    | 26       |          | 170   | 125   |          |          |          | 143      |          | 50       | 47 |
| 1      |                |       | HG PENCIL-20x110/BT40  | 20         | 40    | 32       |          | 155   | 110   |          |          |          | 128      | 60       | 52       | 49 |
| 1      |                |       | HG PENCIL-20x190/BT40  | 20         | 40    | 32       |          | 235   | 190   |          |          |          | 208      | 60       | 52       | 49 |
| 1      | CAT V          | ISO40 | HG PENCIL-6x50/CAT40   | 6          | 40    | 12       |          | 88    | 50    |          |          |          | 68,95    |          | 40       | 37 |
| 1      |                |       | HG PENCIL-8x50/CAT40   | 8          | 40    | 14,5     |          | 88    | 50    |          |          |          | 68,95    |          | 40       | 37 |
| 1      |                |       | HG PENCIL-10x50/CAT40  | 10         | 40    | 17       |          | 88    | 50    |          |          |          | 68,95    |          | 40       | 37 |
| 1      |                |       | HG PENCIL-10x100/CAT40 | 10         | 40    | 17       |          | 138   | 100   |          |          |          | 118,95   |          | 40       | 37 |
| 1      |                |       | HG PENCIL-12x50/CAT40  | 12         | 40    | 19,5     |          | 88    | 50    |          |          |          | 68,95    |          | 40       | 37 |
| 1      |                |       | HG PENCIL-12x100/CAT40 | 12         | 40    | 19,5     |          | 138   | 100   |          |          |          | 118,95   |          | 40       | 37 |
| 2      |                |       | HG PENCIL-12x150/CAT40 | 12         | 40    | 19,5     | 24,5     | 188   | 150   | 50       | 75       | 168,95   |          | 40       | 37       |    |
| 1      |                |       | HG PENCIL-16x75/CAT40  | 16         | 40    | 26       |          | 113   | 75    |          |          |          | 93,95    |          | 50       | 47 |
| 1      |                |       | HG PENCIL-16x125/CAT40 | 16         | 40    | 26       |          | 163   | 125   |          |          |          | 143,95   |          | 50       | 47 |
| 3      |                |       | HG PENCIL-20x110/CAT40 | 20         | 40    | 32       |          | 148   | 110   |          |          |          | 128,95   | 60       | 52       | 49 |
| 3      |                |       | HG PENCIL-20x190/CAT40 | 20         | 40    | 32       |          | 228   | 190   |          |          |          | 208,95   | 60       | 52       | 49 |

$l_1$  = programming length