



## SERVICE INSTRUCTIONS:

### HABEGGER GUIDE BUSHES WITH CARBIDE ROLLERS

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## **1 TYPES OF GUIDE BUSHES**

Our manufacturing program includes several types of guide bushes with the target to adapt them to the different machines on the market. The basic principle is, however, identical for each of these types.

- Type D
- Type LD
- Type EXT
- Type CNC
- Type EN
- Type C
- Type TP / 3 positions (see special documentation)

Our technical service is at your disposal to help you by the selection of a specific guide bush for your machines.

## **2 MAIN ADVANTAGES**

### **2.1 Miscellaneous**

- Minimum play: higher precision
- No risk of seizing up: continued production
- High rotation speed (no limited by the bush): more production
- Maximum turning length: no restriction

### **2.2 Materials**

It is particularly recommended for tough materials, which would easily seize-up, like stainless steel, nickel, etc., or when knurling or any other operations causing a high radial effort on the bar are effected.

## **3 ASSEMBLY**

### **3.1 Important**

**The guide bush can only be used for bars of the diameter which corresponds to the size indicated on the cap no 21.**

### **3.2 Assembly on the machine**

Assembly on the machine is made like you do for a conventional guide bush. We offer a great choice of bush holders and reduction sleeves.

## **4 ADJUSTMENT AND USE**

### **4.1 Principle**

The material bar is guided by tungsten carbide rollers driven by the bar's rotation. This is like the function principle of a needle bearing, where the inside casing would be the material bar (direct contact).

### **4.2 Use**

The *Habegger* guide bushes may be used on machines with clockwise and anti-clockwise revolution direction (CW/CCW).

### 4.3 Precision

The guide bushes' accuracy will be at the maximum after a few day run, once the rolling path gets stabilized.

If some variations occur in the diameter of the workpieces, after a certain time, reverse the rollers.

### 4.4 Adjustment of the bar clearance

#### 4.4.1 Guide bushes D/LD/EXT/CNC/EN

The adjustment of the bar clearance is effected as for a conventional guide bush, i. e. by acting on the nut no 29 at the back of the bush.

It is possible to adjust the material bar's clearance within the *Habegger* guide bush (clearance is increased). Tightening that nut permits to close the guide bush (clearance becomes decreased). The final adjustment must be effected by tightening the nut no 29.

#### 4.4.2 Guide bush C

Adjusting the material bar clearance: by acting with the special wrench onto the lid in front of the bush. To adjust the guide bush, let the material bar come out of the bush, at the front side. It will serve as a guide for the wrench. Thus the wrench will not deviate and will not hurt the tools.

By undoing this lid, we open the guide bush (the clearance increases). By screwing it on, we close the bush (the clearance gets smaller). The final adjustment must always be done when you screw the lid on.

### 4.5 Backward movement of the bar

If the material bar moves back when the collet gets opened and when the workpieces become too short, this means that the material bar is too tight. The weight of the push-rod is not sufficient to advance the bar. It is important to avoid polishing the material bar by a guide bush which is too tight.

### 4.6 Radial position of the guide bush

It is advised to change the radial position of the guide bush from time to time, in order to balance the wear in a uniform manner over the whole rolling path of the rollers. Change its position within the bush-holder. For this purpose, index the guide bush by 120 °.

## 5 LUBRICATION

### 5.1 Filter

The lubrication system with filter prevents swarf from entering into the interior of the guide bushing causing premature wear of the carbide rollers.

### 5.2 Guarantee

***Habegger* guide bushes which are used without filtered lubrication will not be subject to the manufacturer's guarantee.**

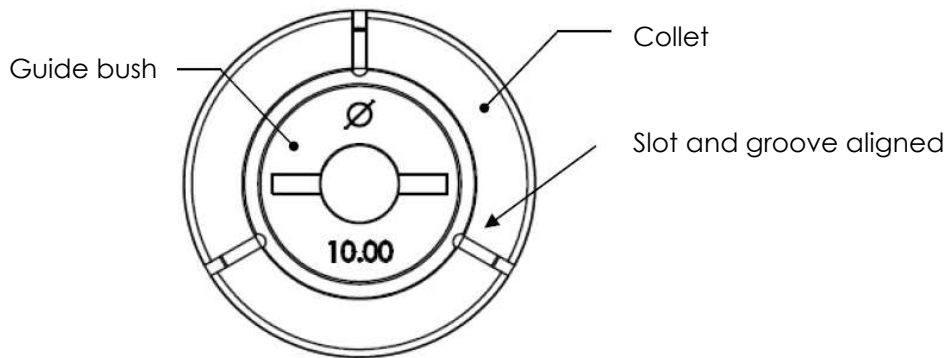
### 5.3 Lubrication

**The new regulations with respect to the environment incite the turning shops to use cutting oils without chlorine. This may cause frequent seizing-up when using conventional guide bushes, especially when machining stainless steel. In such a case, the *Habegger* guide bushes are most appreciated.**

## 5.4 Guide bushes CNC, EN and C



- Guide bushes of the types CNC, EN and C are lubricated through their centre. For this reason, guide bush holders of our own make must be used. They assure a perfect lubrication.
- The 3 notches on the front face of the bush must be placed in front of the clamping collet slots, not so as to cut the arrival of the cooling liquid.



## 6 ORDERS OF SPARE PARTS

### 6.1 Parts

When ordering spare parts, please mention:

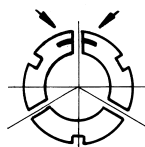
- a) Type of guide bush    b) Diameter of bar    c) No and name of wanted part

Example: for guide bush D18 / material bar  $\varnothing$  4.50 / sleeve no 25

### 6.2 Assembly of cone

#### Cone no 22:

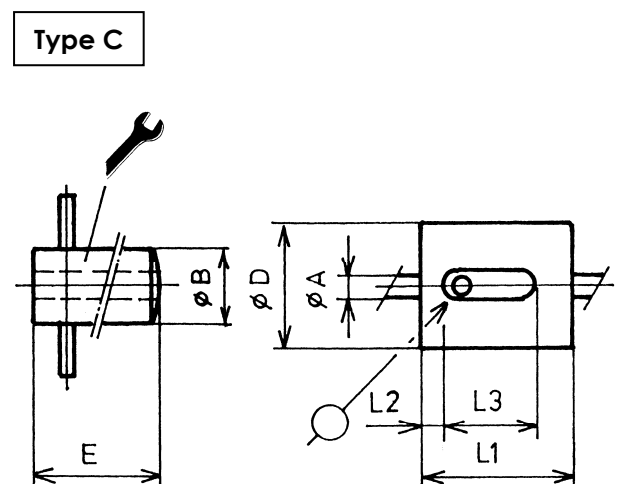
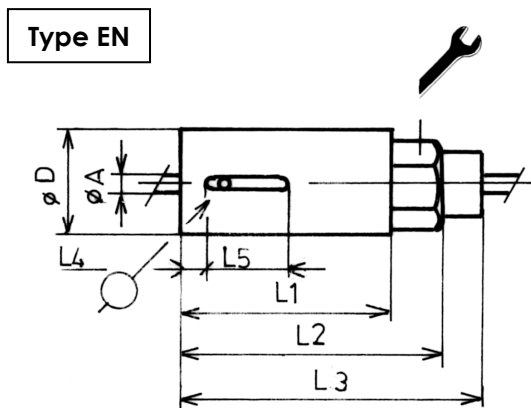
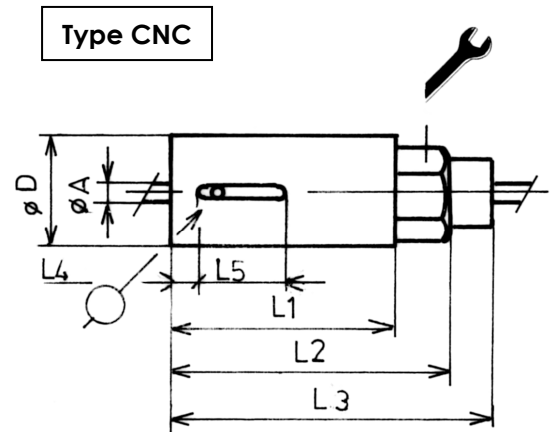
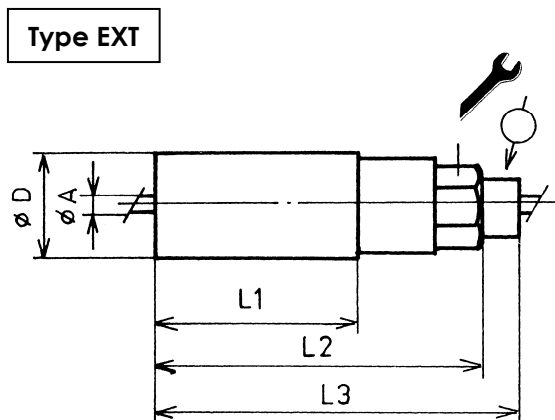
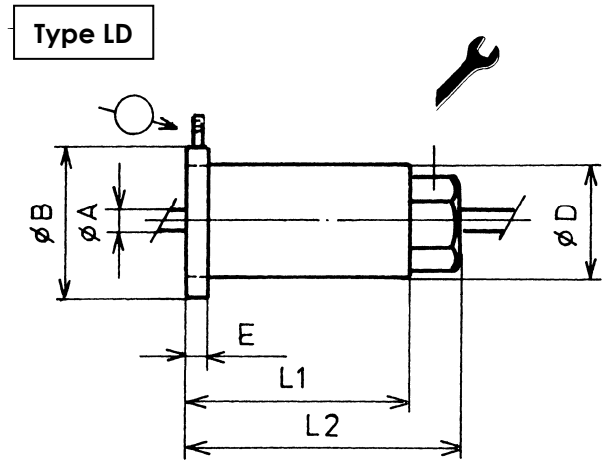
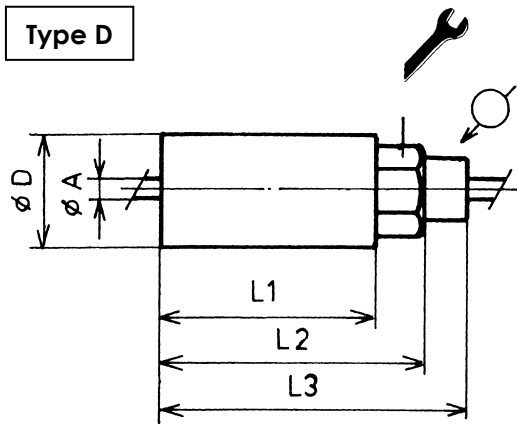
For the assembly, please strictly respect the logic according to the following sketch:




## 7 EXCHANGE KITS

The Habegger guide bushes are divided in 8 different families which can be identified according to the outside diameter of the sleeve no 25. For each of these families, it is possible to suit a maximum of diameter ranges, by exchanging the inside parts. Kits are foreseen for this purpose.

## 8 TABLE OF MEASUREMENTS



All the following dimensions are given in millimetres.

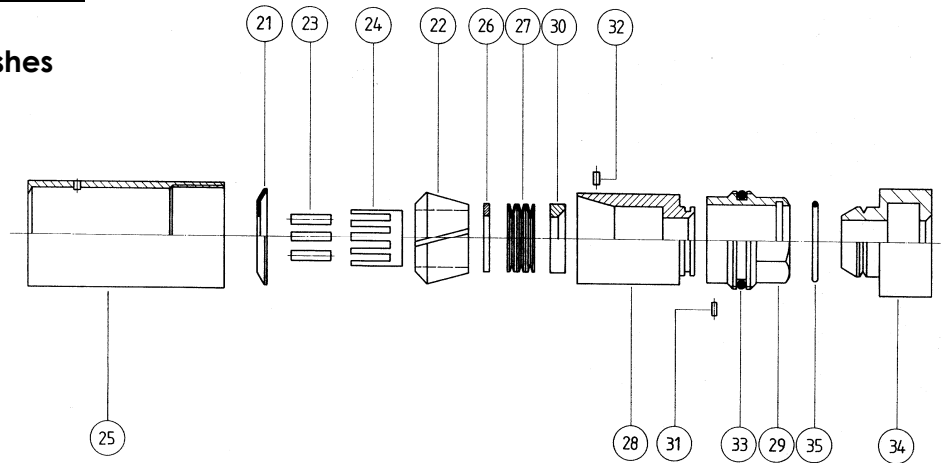
TYPES	Ø A	Ø D	L1	L2	L3	L4	L5	Ø B	E	
D 15	1.59 – 3.37	15	35	59	71					10
D 18	3.38 – 4.76	18	35	59	71					12
D 22	4.77 – 5.67	22	40	59	73					14
D 25	5.68 – 7.36	25	45	59	73					17
D 30	7.37 – 10.45	30	50	62	76					22
D 35	10.46 – 18.10	35	55	67	81					25
D 40	18.11 – 22.00	40	60	72	86					30
D 50	22.01 – 26.00	50	65	79	93					36
LD 15	1.59 – 3.37	15	35	59				25	5	10
LD 18	3.38 – 4.76	18	35	59				28	5	12
LD 22	4.77 – 5.67	22	40	59				32	5	14
LD 25	5.68 – 7.36	25	45	62				35	5	17
LD 30	7.37 – 10.45	30	50	67				40	6	22
LD 35	10.46 – 18.10	35	55	67				45	6	25
LD 40	18.11 – 22.00	40	60	72				50	6	30
LD 50	22.01 – 26.00	50	65	79				60	6	36
EXT 15	1.59 – 3.37	15	35	81	93					10
EXT 18	3.38 – 4.76	18	35	81	93					12
EXT 22	4.77 – 5.67	22	40	81	93					14
EXT 25	5.68 – 7.36	25	45	84	98					17
EXT 30	7.37 – 10.45	30	50	84	98					22
EXT 35	10.46 – 18.10	35	55	84	98					25
CNC 15	1.59 – 3.37	15	35	59	71	5	12			10
CNC 18	3.38 – 4.76	18	35	59	71	11.50	12			12
CNC 22	4.77 – 5.67	22	40	59	73	11.50	12			14
CNC 25	5.68 – 7.36	25	45	59	73	11.50	12			17
CNC 30	7.37 – 10.45	30	50	62	76	10.50	14			22
CNC 35	10.46 – 18.10	35	55	67	81	10.50	14			25
CNC 40	18.11 – 22.00	40	60	72	86	10.50	14			30
CNC 50	22.01 – 26.00	50	65	79	93	10.50	14			36
EN 15	1.59 – 3.37	15	35	59	71	11.50	15			10
EN 18	3.38 – 4.76	18	35	59	71	11.50	15			12
EN 22	4.77 – 5.67	22	40	59	73	11.50	25			14
EN 25	5.68 – 7.36	25	45	59	73	11.50	30			17
EN 30	7.37 – 10.45	30	50	62	76	10.50	32			22
EN 35	10.46 – 18.10	35	55	67	81	10.50	32			25
EN 40	18.11 – 22.00	40	60	72	86	10.50	32			30
EN 50	22.01 – 26.00	50	65	79	93	10.50	32			36
C 15	1.59 – 3.37	15	27	10	9			11	45	C15
C 18	3.38 – 4.76	18	30	10	9			14	60	C18
C 22	4.77 – 5.67	22	32	10	12			17	60	C22
C 25	5.68 – 7.36	25	36	10	15			19	60	C25
C 30	7.37 – 10.45	30	40	10	19			23	60	C30
C 35	10.46 – 18.10	35	42	10	22			27	60	C35
C 40	18.11 – 22.00	40	50	10	27			32	80	C40
C 50	22.01 – 26.00	50	55	10	30			38	80	C50
C 66	26.01 – 32.00	66	60	10	30			45	80	C66

➤➤➤ Ø 26.01 - 32.00 on request

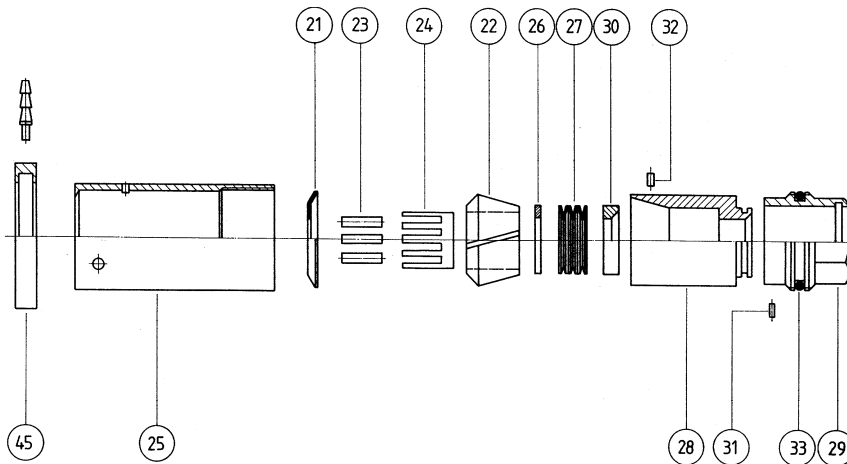
## 9 LIST OF SPARE PARTS

### 9.1 Diverse guide bushes

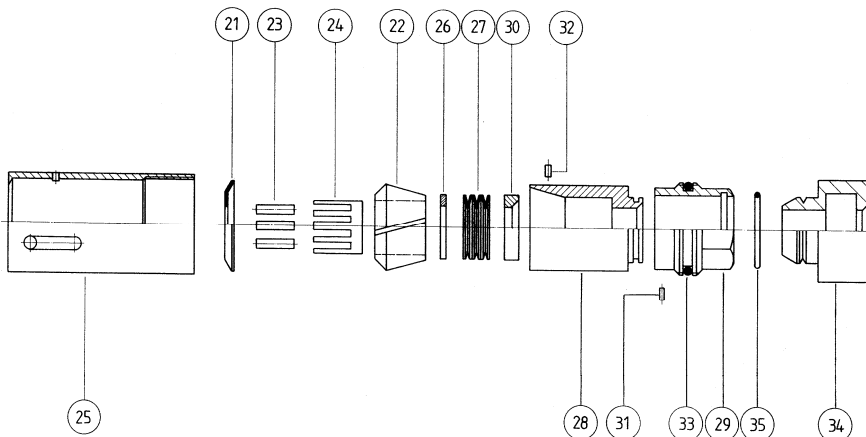
#### Type D + EXT



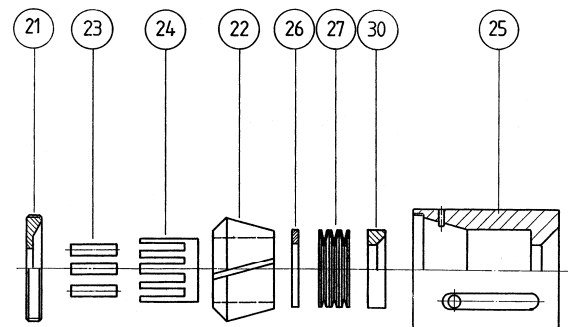
#### Type LD



#### Type CNC + EN



#### Type C



21	Cap
22	Cone
23	Rollers
24	Cage
25	Sleeve
26	Ring (white)
27	Spring
28	Coupling
29	Nut
30	Guide (black)
31	Nut stud

32	Cone stud
33	O-Ring with no 29
34	Movable endpiece
35	O-Ring with no 34
36	Fitting
37	Pipe fitting No 37 (15 – 22)
37	Pipe fitting No 37 (25 – 35)
41	Flexible pipe
42	Fitting

43	Sheath
45	Distribution-ring
46	Nipple
51	Flexible pipe
55	Fitting
61	Fitting
64	Fitting
65	Fibre seal
66	Plate
67	Filter cartridge

## 9.2 Filters

