

# Actuating units

Use MANDO and MAXXOS segmented mandrels for stationary clamping



# MANDRELS

## Mandrel actuating units ms dock / hs dock

Complete machining made easy: You cannot only use our MANDO and MAXXOS segmented mandrels on the lathe, you can also use them in stationary mode. Simply screw the mandrel onto the ms dock [manually actuated] or hs dock [hydraulically actuated] and you can clamp your workpiece from the inside, stationary mode. Precise, without vibration and with minimum set-up effort. The extremely wear-resistant segmented clamping bushing of case-hardened chromium-nickel-steel with the rubber between the segments, especially developed by HAINBUCH, makes it possible. The hand-actuated ms dock in conjunction with stationary MANDO or MAXXOS segmented mandrels is ideal for machining centers, measuring machines, radial drill presses, parallel and angle plate clampings or for clamping on dividing heads.

hs dock is an absolute powerhouse that enables hydraulic implementation of MANDO or MAXXOS segmented mandrels on machining centers. Media supply can be freely selected. It is actuated either from the side or via a base plate from below. Perfect when automation is involved.

The rotating ms dock version is applicable for max. rpm and grinding machines.

### Key advantages

- Mandrels can be used on machining center
- ms dock rotating for lathes without clamping cylinder
- Manual / hydraulic mandrel actuation
- Ideal for 5-sided machining
- Clamping range  $\varnothing$  8 – 200 mm



ms dock mandrel actuating unit in use

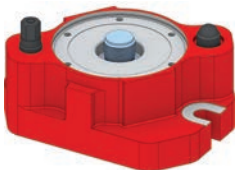













hs dock mandrel actuating unit in use

## MANDRELS

### Mandrel actuating units ms dock / hs dock

#### Actuating units at a glance

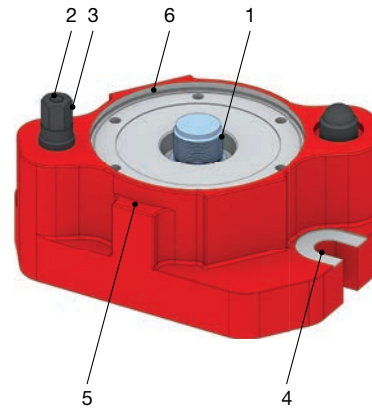
	ms dock	hs dock
		
Description	Manual actuating unit	Hydraulic actuating unit
Variant		Hydraulic clamping, hydraulic release; hydraulic clamping with spring support, hydraulic release
Advantages	<ul style="list-style-type: none"> <li>■ Manual actuation – a clamping cylinder is not required</li> <li>■ Sensitive manual clamping is possible</li> </ul>	<ul style="list-style-type: none"> <li>■ Hydraulic actuation</li> <li>■ Ideal for automated clamping</li> <li>■ Can be combined as desired for multiple clamping</li> </ul>
Adaptations	 MANDO T211 [Mandrel with draw bolt]   MANDO T212 [Mandrel without draw bolt]   MANDO T812 [Deadlength mandrel without draw bolt]   MANDO G211 [Mandrel, e.g. for gear cutting with draw bolt]   MAXXOS T211 [Mandrel for the utmost accuracy, with draw bolt]	 MANDO T211 [Mandrel with draw bolt]   MANDO T212 [Mandrel without draw bolt]   MANDO T812 [Deadlength mandrel without draw bolt]   MANDO G211 [Mandrel, e.g. for gear cutting with draw bolt]   MAXXOS T211 [Mandrel for the utmost accuracy, with draw bolt]

## Mandrel actuating units ms dock / hs dock

## Actuating unit ms dock in detail

## Designation

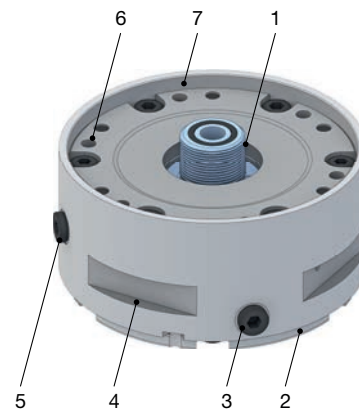
- 1 Connecting thread for clamping device actuation
- 2 Central grease nipple, optimal draw-in force due to perfect lubrication
- 3 Actuating screw
- 4 Screw slots for mounting
- 5 Supporting surface for additional holding clamps
- 6 Interface with cylindrical fit



## Actuating unit hs dock in detail

## Designation

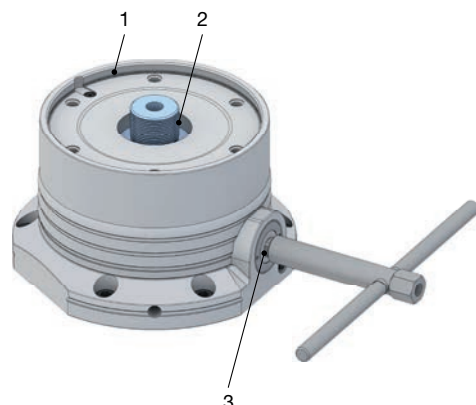
- 1 Connecting thread for clamping device actuation
- 2 Ø for location in the base plate
- 3 Connections on the side or base to release the clamping
- 4 Supporting surface for additional holding clamps
- 5 Connections on the side or base to actuate the clamping
- 6 Mounting screws
- 7 Interface with cylindrical fit



## Mandrel actuating unit ms dock rotating in detail

## Designation

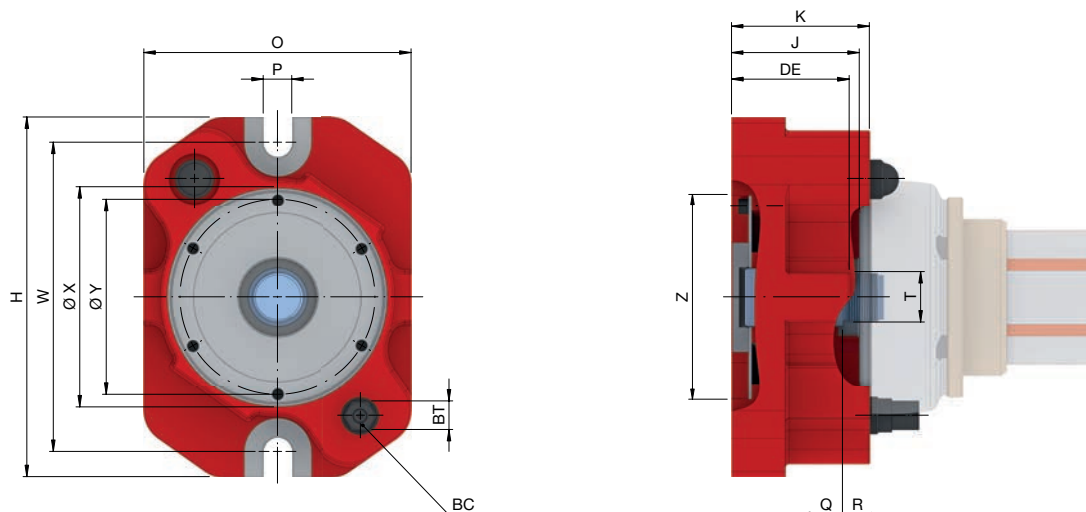
- 1 Interface with cylindrical fit
- 2 Connecting thread for clamping device actuation
- 3 Manual actuation via socket wrench



## MANDRELS

### Mandrel actuating units ms dock / hs dock

#### Actuating unit ms dock. Technical data and order overview



Product	ms dock		
Size	XXS – 4 / A – F		5 – 7
Max. axial drawtube force [pull / push] [kN]	35		40
Max. actuating torque [Nm]	55		70
RPM n max. [1/min.]		60	
Reserve stroke axial [mm]		4	
Release stroke axial [mm]		3	
Interface	X	Ø 131 H6	Ø 219 H6
Interface hole circle	Y	LK Ø 116 [6 x M8]	LK Ø 192 [6 x M10]
Connecting thread outside	T	M30 x 1,5	
Wrench size [SW]	BT	17	
Length [mm]	H	214	310
Height [mm]	J	76	96
Overall height [mm]	K	82	109
Width [mm]	O	159	245
Centering edge [mm]	Z	122	179,5
Screw connection width [mm]	P	17	
Clamping edge height [mm]	DE		92
Bolt hole distance [mm]	W	184	280
Weight [kg]		12	36
In stock		✓	✓
Material no.	10001486		10001487



Mandrels	Accessory overview
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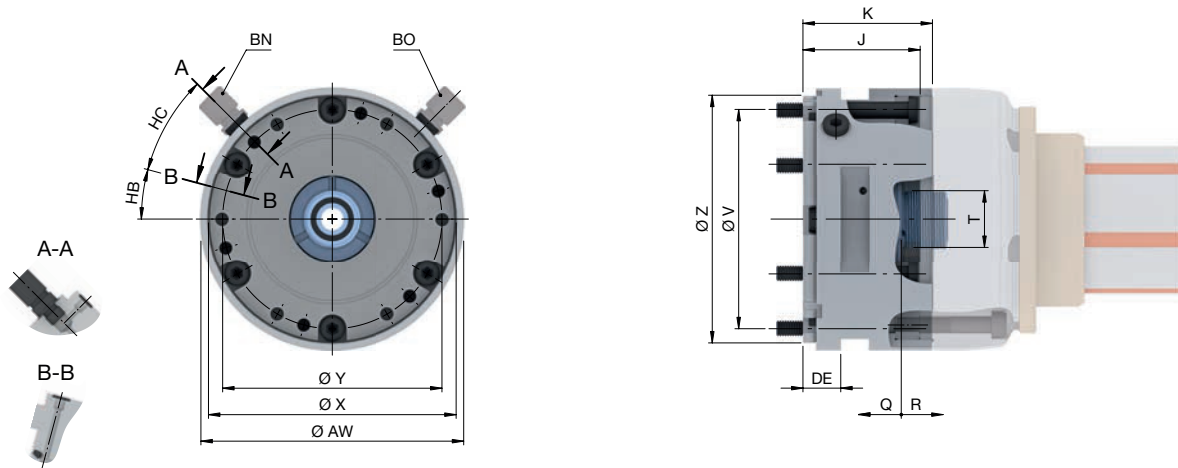
#### Scope of delivery

- Mandrel actuating unit
- Actuating tool

# MANDRELS

## Mandrel actuating units ms dock / hs dock

### Actuating unit hs dock. Technical data and order overview



Product	hs dock			
Size	XXS – 4 / A – F		5 – 7	
Variant	Without spring	With spring	Without spring	With spring
Max. axial drawtube force [pull / push] [kN]	35		45	
Max. actuating pressure [bar]	56	44	51	47
Max. release pressure [bar]	56		51	
RPM n max. [1/min.]	60			
Spring draw force axial [kN]		4		4
Spring release pressure [bar]		12		8
Reserve stroke axial [mm]	Q	3,5	3,5	1,5
Release stroke axial [mm]	R	4	4	2
Interface	X	Ø 131 H6	Ø 219 H6	
Interface hole circle	Y	LK Ø 116 [6 x M8]	LK Ø 192 [6 x M10]	
Connecting thread outside	T	M30 x 1,5		
Height [mm]	J	62		
Overall height [mm]	K	68,5	76	
Outer Ø [mm]	AW	139	230	
Bolt hole circle	V	LK Ø 116 [6 x M8]	LK Ø 192 [6 x M10]	
Centering edge [mm]	Z	131	219	
Clamping edge height [mm]	DE	20		
Release	BN	[1/8"]		
Clamping	BO	[1/8"]		
Release via base plate [°]	HC	30	33	
Clamping via base plate [°]	HB	15	13,5	
Weight [kg]		9	18	
In stock	✓	-	-	-
Material no.	10002070	10002071	10002072	10002073



	
Mandrels	Accessory overview
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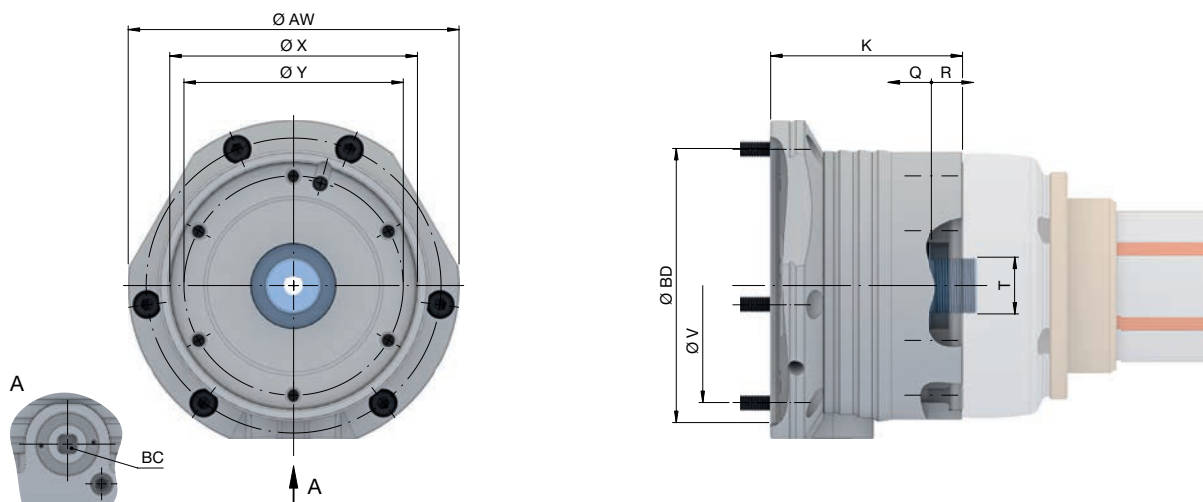
### Scope of delivery

- Mandrel actuating unit

## MANDRELS

### Mandrel actuating units ms dock / hs dock

#### Actuating unit ms dock rotating. Technical data and order overview



Size	XXS – 4 / A – F	
Max. axial drawtube force [pull / push] [kN]	35	
Max. actuating torque [Nm]	BC	62
RPM n max. [1/min.]		7000
Interface	X	Ø 131 H6
Interface hole circle	Y	LK Ø 116 [6 x M8]
Flange location	BD	Ø 145 H5
Overall height [mm]	K	101,5
Connecting thread outside	T	M30 x 1,5
Reserve stroke axial [mm]	Q	3
Release stroke axial [mm]	R	3
Outer Ø [mm]	AW	174
Bolt hole circle	V	LK Ø 156 [6 x M8]
Weight [kg]		12
In stock		✓
Material no.		10001050

Please note: Only pull-back mandrels [T211, T212, and G211] can be used.

		
Mandrels	Flanges	Accessory overview
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#### Scope of delivery

- Mandrel actuating unit
- Actuating tool

MANDRELS

Mandrel actuating units ms dock / hs dock

Mandrels

Stationary clamping devices

Adaptation clamping devices

Measuring technology / Automation

Quick change-over systems

Special solutions

Clamping elements / Accessories

Services

Multi spindles



**Machine-specific mandrels**

Standard or machine specific, which mandrel fits?

In 90 % of all cases, you will find what you are looking for with our standard mandrels, that fit for the following brands, such as:

- Biglia
- Daewoo
- Doosan
- Emco
- Gildemeister
- MAG Boehringer
- MAG Hessapp
- Mazak
- Miyano
- Monforts
- Mori Seiki
- Nakamura
- Okuma
- Scherer
- Spinner
- Takamaz
- Weiler
- Weisser
- and other machine manufacturers

For certain lathes we have designed special mandrels that take the connection or other equipment features of the respective machine into account. You will find a selection to the right, such as

- LEHMANN rotary indexing tables

Of course, we still have much more in the product line. Simply ask us about it.



**MANDO T211 mandrel for pl Lehmann rotary indexing tables. Pull-back / with draw bolt**

Size	Type	Segmentspann-büchse	Spindle nose	In stock	Material no.
0	510	sb100r	HSK-A63	-	10001303
1	520	sb210r	A2-5	-	10001304
2	520	sb120r	A2-5	-	10001305
3	530	sb130r	A2-8	-	10001306
4	530	sb140r	A2-8	-	10001307

Incl. drawtube adapter and flange for direct assembly on the rotary indexing table.

**MANDO T212 mandrel for pl Lehmann rotary indexing tables. Pull-back / without draw bolt**

Size	Type	Segmentspann-büchse	Spindle nose	In stock	Material no.
XXS	507	sb2xxsr	HSK-A63	-	10001308
XS	507	sb2xsr	HSK-A63	-	10001309
S	510	sb2sr	HSK-A63	-	10001310
0	510	sb200r	HSK-A63	-	10001311
1	520	sb210r	A2-5	-	10001312
2	520	sb220r	A2-5	-	10001313
3	530	sb230r	A2-8	-	10001314
4	530	sb240r	A2-8	-	10001315

Incl. drawtube adapter and flange for direct assembly on the rotary indexing table.

**MANDO T812 mandrel for pl Lehmann rotary indexing tables. Deadlength / without draw bolt**

Size	Type	Segmentspann-büchse	Spindle nose	In stock	Material no.
XXS	507	sb2xxsr	HSK-A63	-	10001316
XS	507	sb2xsr	HSK-A63	-	10001317
S	510	sb2sr	HSK-A63	-	10001318
0	510	sb200r	HSK-A63	-	10001319
1	520	sb210r	A2-5	-	10001320
2	530	sb220r	A2-6	-	10001321
3	530	sb230r	A2-8	-	10001322
4	530	sb240r	A2-8	-	10001323

Includes drawtube adapter and flange for direct mounting on the rotary table.  
We can also offer other sizes for your Lehmann partial axis size.  
MAXXOS mandrel is likewise available on request.