

# Centco4

**4-JAW CHUCK**  
**2+2 SELF CENTERING  
AND COMPENSATING**

## **UNIVERSAL**

Independent self centering clamping  
in 2 axis via 1 central actuating mechanism

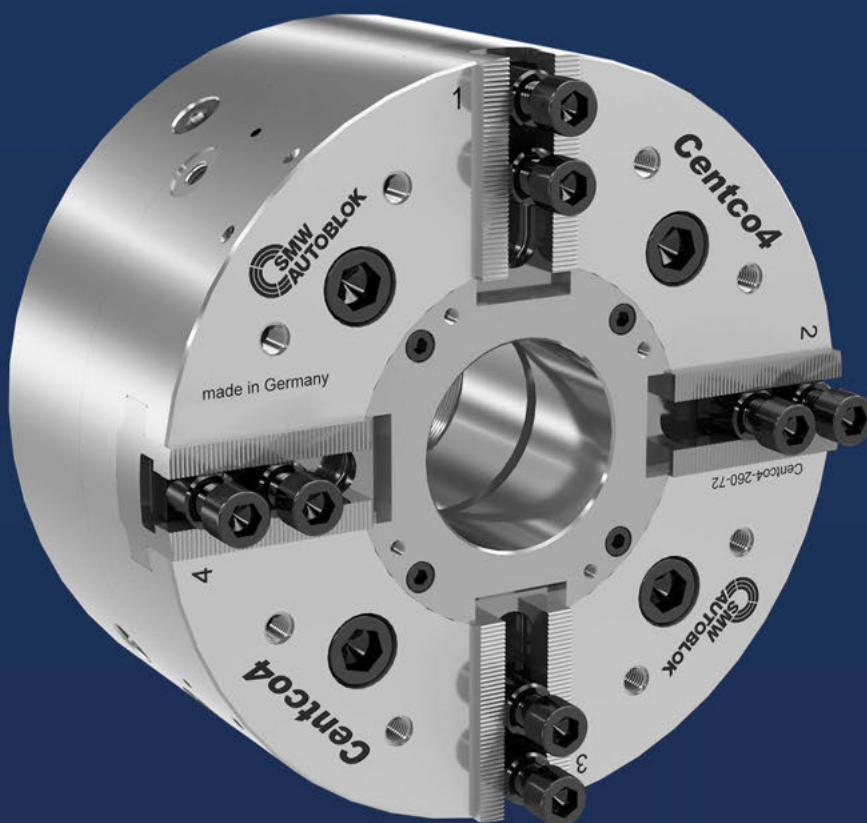
## **FLEXIBLE**

Clamping of  
every workpiece geometry

Centrifugal force compensation  
for highest speed

## **PRECISE**

Mechanical  
high precision jaw drives



# Centco4

INCH  
SERRATION

## 4-jaw chuck

- 2+2 self centering
- Independent self centering clamping in 2 axis
- Centrifugal force compensation



### Application/customer benefits

- Independent self centering clamping in 2 axis via 1 central actuating mechanism
- Mechanical centering of the workpiece
- Standard cylinder can be used for actuating
- Clamping of every workpiece geometry possible
- Less workpiece deformation compared to 3-jaw chucks
- Long lifetime due to case hardened parts
- Large range of standard top jaws
- Suitable für OD and ID clamping

### Technical features

- Centrifugal force compensation
- Optimized lubrication system
- Large through-hole
- Jaw interface 1/16" x 90°

### Standard equipment

4-jaw chuck,  
8 pieces T-nuts and bolts

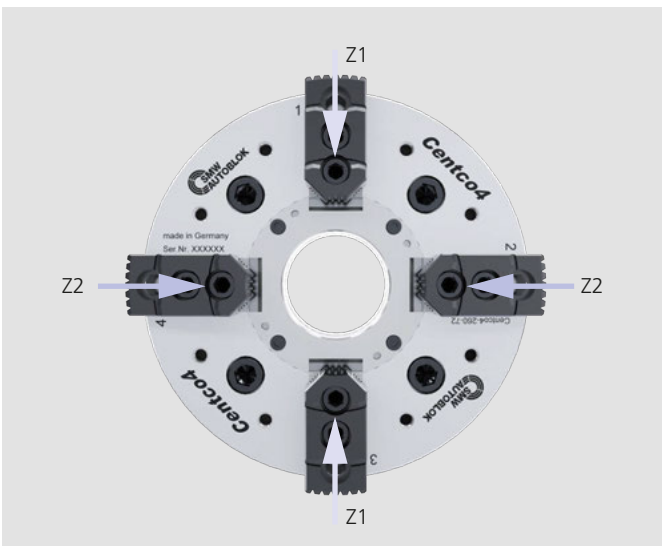
### Ordering example

4-jaw chuck  
Centco4-260-7-Z-220

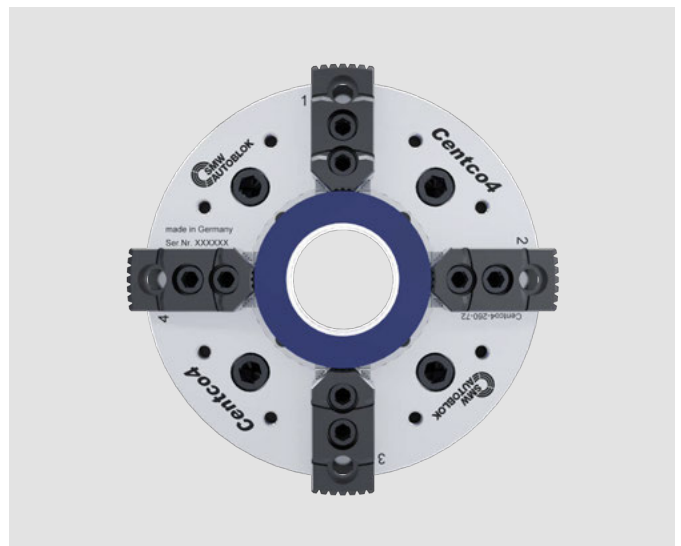
## Function / Application examples

### 2+2 self centering and compensating clamping\*

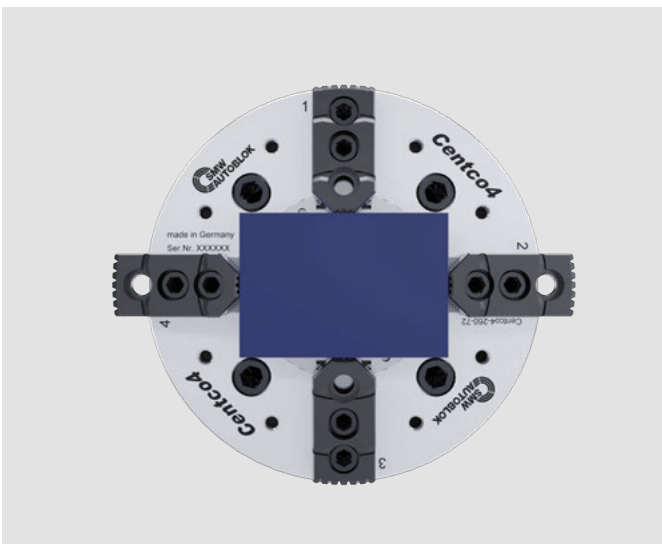
In the beginning the jaw pairs **Z1** + **Z2** only apply a force that is necessary to center the workpiece. Only if both jaw pairs **Z1** and **Z2** are in contact with the workpiece, the grip force necessary for machining is applied.



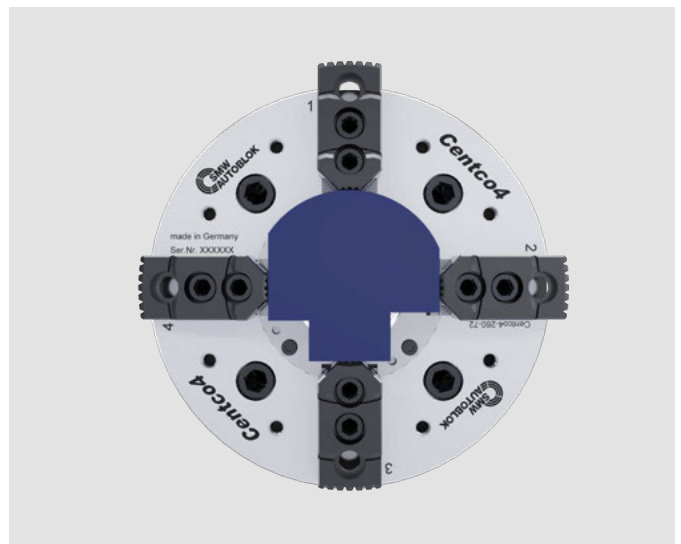
### 2+2 self centering clamping of round or thinwalled workpieces



### 2+2 self centering and compensating clamping of rectangular or square workpieces



### 2+2 self centering and compensating clamping of unshaped workpieces



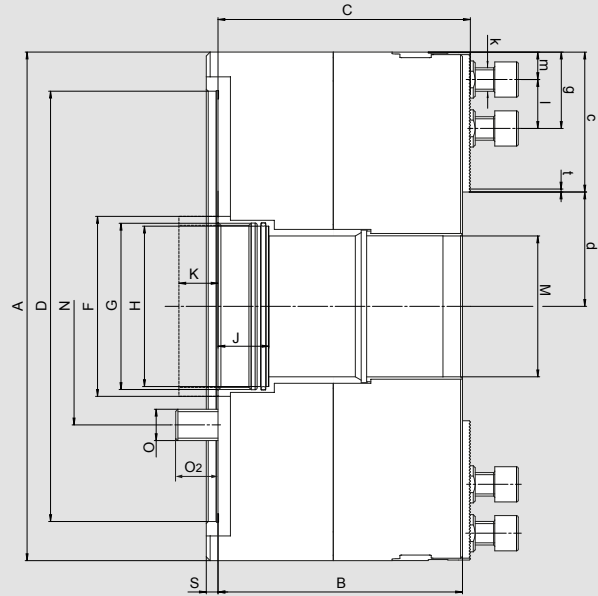
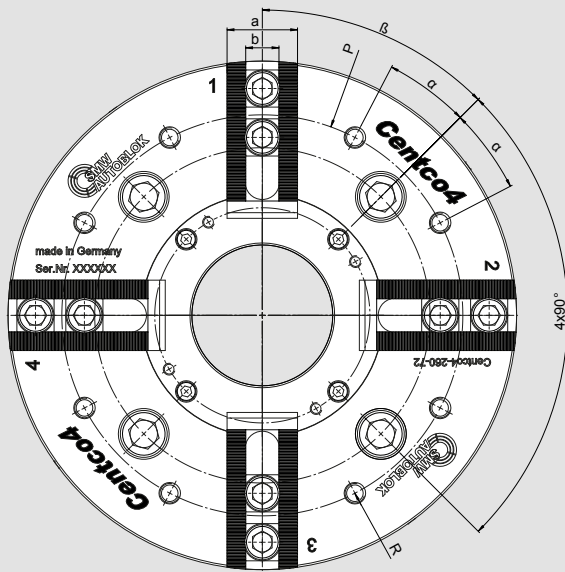
\* **Z1**: Self centering clamping axis 1 / **Z2**: self centering clamping axis 2.  
**Z1** is compensating to **Z2**.

# 4-jaw chuck

- 2+2 self centering
- Independent self centering clamping in 2 axis
- Centrifugal force compensation

# Centco4

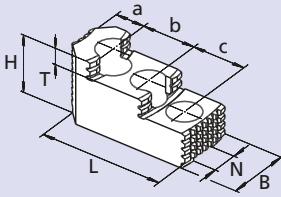
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For more detailed information please ask our customer service.

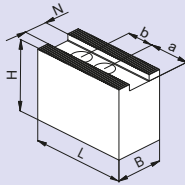
SMW-AUTOBLOK Type		Centco4 210-52	Centco4 260-72	Centco4 315-92	Centco4 400-112	Centco4 400-112	Centco4 500-155	Centco4 630-165
Mounting		Z170	Z220	Z300	Z300	Z380	Z380	Z380
Id. No.		163120	162780	163140	163175	163160	163580	163770
Outside diameter	<b>A</b>	210	260	315	400	400	500	630
	<b>B</b>	108.5	125	134	146	146	156	156
	<b>C</b>	110.5	129	138	150	150	159	159
Diameter Mounting	<b>D H6</b>	170	220	300	300	380	380	380
	<b>F</b>	68	92	115	142	142	178	188
Piston thread / depth	<b>G</b>	M60 x 2 / 20	M85 x 2 / 20	M105 x 2 / 20	M125 x 2 / 28	M125 x 2 / 28	M165 x 2 / 28	M175 x 2 / 28
Centering draw tube	<b>H H7</b>	57	82	102	122	122	162	172
Face contact draw tube	<b>J</b>	30	30	30	38	38	38	38
Piston stroke	<b>K</b>	17	20	23	25	25	30.5	30.5
Through-hole	<b>M H7</b>	52	72	92	112	112	155	165
Bolt circle	<b>N</b>	133.4	171.4	235.0	235.0	330.2	330.2	330.2
Fixing bolt	<b>O</b>	M12	M16	M20	M20	M24	M24	M24
	<b>O2</b>	19.5	22	29	25	29	34.5	34.5
	<b>P</b>	170	205	260	280	280	410 / 280	585 / 420 / 300
Thread / depth	<b>R</b>	M8 / 12	M10 / 21	M10 / 21	M10 / 21	M10 / 21	M10 / 15	2xM16/24-M12/18
	<b>S</b>	5	6	6	6	6	6	6
Base jaw width	<b>a</b>	35	36	40	45	45	60	60
Groove width	<b>b H7</b>	14	17	17	21	21	25.5	25.5
	<b>c</b>	60	71.5	91	117.5	117.5	142.5	202.5
Max.	<b>d</b>	45	58.5	66.5	82.5	82.5	107.5	112.5
Max. / min.	<b>g</b>	47 / 22	58 / 25	78 / 25	104 / 35	104 / 35	115 / 44	175 / 44
Bolt ISO 4762 12.9	<b>k</b>	M10	M12	M12	M16	M16	M20	M20
Spacing min.	<b>l</b>	16	19	19	25	25	30	30
Spacing min.	<b>m</b>	6	6	6	10	10	14	14
Inch serration	<b>t</b>	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°
	<b>α°</b>	17.5	17.5	17.5	17.5	17.5	15	15
	<b>β°</b>	45	45	45	45	45	45	45
Stroke per jaw	mm	4.5	5.25	6	6.5	6.5	8	8
Equalising per jaw	mm	3.4	4	5	5	5	6	6
Max. actuating force	kN	40	50	60	85	85	95	95
Max. total gripping force	kN	100	125	150	210	210	230	230
Max. speed	min-1	5000	4500	4000	3200	3200	2600	1800
Weight (without jaws)	kg	24.5	42	66	121.5	121.5	200	330
Moment of inertia	kgm <sup>2</sup>	0.15	0.4	0.92	2.7	2.7	7.12	18.1
Recommended actuating cylinder		SIN-S 100 / 125	SIN-S 125 / 150	SIN-S 125 / 150	SIN-S 150 / 175	SIN-S 150 / 175	SIN-S 150 / 175	SIN-S 150 / 175
Recommended actuating cylinder		VNK-T2 130-52	VNK-T2 170-77	VNK-T2 225-95	VNK-T2 250-110	VNK-T2 250-110	VSG 450-165	VSG 450-165

### MHB-D (INCH SERRATION) Hard, reversible stepped top jaws



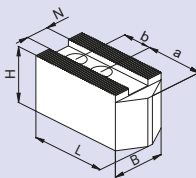
Centco4	210-52	260-72	315-92	400-112	500-115	630-165
Jaw type	MHB-D 160	MHB-D 200	MHB-D 200	MHB-D 251	MHB-D 500	MHB-D 500
Id. No.	12081638	12082038	12082038	12083038	12084548	12084548
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°
B	34	40	40	45	60	60
H	39	45	45	56	75	75
L	65.2	82	82	106.2	140.8	140.8
T	10	10.5	10.5	13.5	19	19
N	14	17	17	21	25.5	25.5
a	18	19	19	26	38	38
b	16.5	23	23	30	38	38
c	16.5	23	23	30	38	38
kg / set	0.9	2.3	2.3	2.9	9.5	9.5

### MWB-D (INCH SERRATION) Soft top jaws Tall version



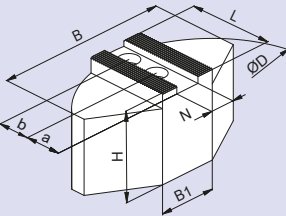
Centco4	210-52	260-72	315-92	400-112	500-115	630-165
Jaw type	MWB-D 165	MWB-D 200	MWB-D 200	MWB-D 250	MWB-D 400	MWB-D 400
Id. No.	5318607	5318837	5318837	5319680	5319831	5319831
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°
B	35	40	40	50	60	60
H	60	60	60	80	90	90
L	70	90	90	120	170	170
N	14	17	17	21	25.5	25.5
a	33	43	43	62	90	90
b	16.5	22	22	28	35	35
kg / set	2.8	4.1	4.1	9.2	21.6	21.6

### AWB-D (INCH SERRATION) Soft top jaws Low / pointed version



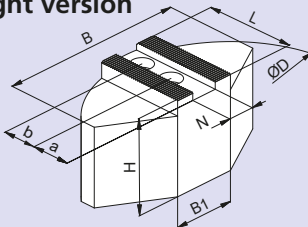
Centco4	210-52	260-72	315-92	400-112	500-115	630-165
Jaw type	AWB-D 165	AWB-D 200	AWB-D 200	AWB-D 250	AWB-D 400	AWB-D 400
Id. No.	5318608	5318838	5318838	5319681	5319834	5319834
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°
B	40	40	40	50	60	60
H	40	40	40	50	60	60
L	100	110	110	120	170	170
N	14	17	17	21	25.5	25.5
a	43	53	53	70	115	115
b	22	22	22	28	35	35
kg / set	2.4	2.7	2.7	5.4	14.5	14.5

### SBS-D (INCH SERRATION) Soft pie jaws



Centco4	210-52	260-72	315-92	400-112	500-115	630-165
Jaw type	SBS-D 165	SBS-D 200	SBS-D 200	SBS-D 200	SBS-D 400	SBS-D 400
Id. No.	5318610	5318839	5318839	5319684	5319832	5319832
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°
B	120	140	140	180	330	330
B1	40	64	64	50	190	190
D	165	200	200	250	440	440
H	60	60	60	70	85	85
L	60	70	70	80	155	155
N	14	17	17	21	25.5	25.5
a	25	35	35	30	85	85
b	22	22	22	29	35	35
kg / set	7.1	10.3	10.3	18.3	71	71

### SBA-D (INCH SERRATION) Soft pie jaws aluminium light version



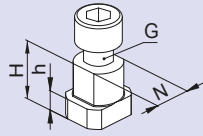
Centco4	210-52	260-72	315-92	400-112	500-115	630-165
Jaw type	SBA-D 165	SBA-D 200	SBA-D 200	SBA-D 250	SBA-D 400	SBA-D 400
Id. No.	5318609	5318840	5318840	5319685	5319833	5319833
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°
B	110	120	120	160	330	330
B1	40	40	40	50	190	190
D	165	200	200	250	440	440
H	58	58	58	78	98	98
L	58	72.5	72.5	87.5	160	160
N	14	17	17	21	25.5	25.5
a	25	35	35	40	85	85
b	20	22	22	29	35	35
kg / set	2.4	3.7	3.7	7.2	32	32

\* SMW-AUTOBLOK is recommending not to clamp any diameters, that are larger than the chuck O.D.

- T-Nuts
- Covers for through-hole

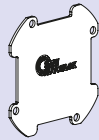
INCH  
SERRATION

## NST T-nuts suitable for Centco4



Centco4	210-52	260-72	315-92	400-112	500-155	630-165
T-nut type	NST14	NST17	NST17	NST21	NST25	NST25
Id. No.	163134	016021	016021	014788	014812	014812
	N 14	17	17	21	25.5	25.5
	H 20	23	23	27	29	29
	h 7.5	9	9	10	11	11
	G					
Cyl.-screw ISO 4762-12.9	M10 x 25	M12 x 30	M12 x 30	M16 x 35	M20 x 40	M20 x 40
Torque Md max. (Nm)	50	70	70	150	250	250

## cover for through-hole



Centco4	210-52	260-72	315-92	400-112	500-155	630-165
Id. No.	163135	163136	163137	163138	163584	163585

**Important for maintenance and safe operation,  
to be ordered with the chuck**

## Grease K67

Special grease for  
manual and power chucks



Cartridge 14 Oz. (DIN 1284)  
Grease content 500 g  
Id. No. 10731223

Can 1000 g  
Id. No. 10731224

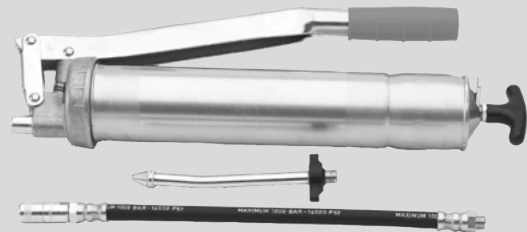


- High adhesion
- High resistance against coolant
- High load bearing capacity
- Low friction coefficient
- High gripping force
- Avoids tribocorrosion

## Grease gun

Grease gun (DIN 1283) for  
cartridges 14 Oz. (DIN 1284)

- Also refillable from grease can 1000 g

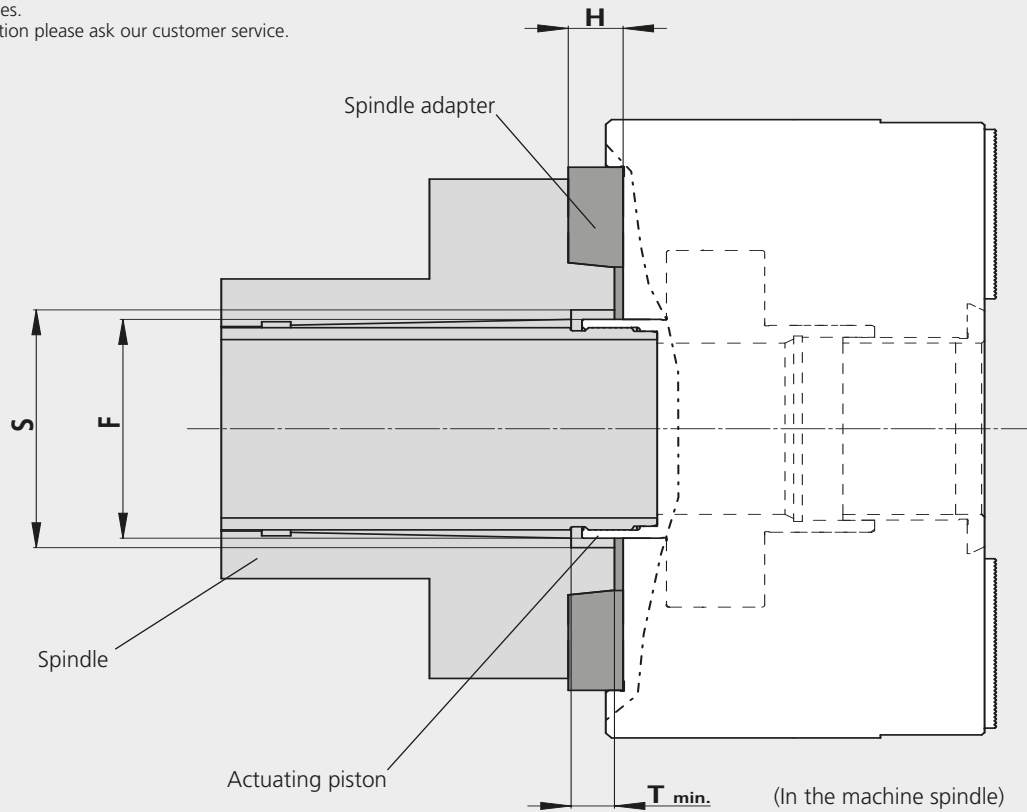


Lubrication set Id. No. 083726

Supply range

- Grease gun
- 1 Adapter flexible for high pressure grease nipple
- 1 Adapter for cone grease nipple

Subject to technical changes.  
For more detailed information please ask our customer service.



Chuck type <i>Centco4</i>	Spindle mounting	Actuating piston dia. F [mm]	Clearance dia. S [mm]	Clearance - depth T min. [mm]*	Id. No. Spindle adapter	Spindle adapter height H [mm]
210-52-Z170	A06	68	> 68	14	24162000	17
			< 68	-	24162110	40
260-72-Z220	A06	92	< 92	-	24162532	50
	A08	92	> 92	17	24182500	19
315-92-Z300	A08	115	> 115	10	24183100	30
			< 115	-	24184000	40
	A11	115	> 115	20	24113100	21
			> 115	11	24113110	30
			< 115	-	2704390	44
400-112-Z300	A11	142	< 142	-	2704390	44
400-112-Z380	A11	142	> 142	2	24115000	40
			< 142	-	2704391	44
	A15	142	> 142	23	24125000	23
			< 142	-	2704392	47
500-155-Z380	A11	178	> 178	8	24115000	40
			< 178	-	2704606	50
	A15	178	> 178	26.5	24125000	23
			< 178	-	273765	50
630-165-Z380	A11	188	> 188	8	24115000	40
			< 188	-	2704606	50
	A15	188	> 188	26.5	24125000	23
			< 188	-	273765	50

\* to clear the axial stroke of the actuating piston (see „technical details piston stroke“ K)





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