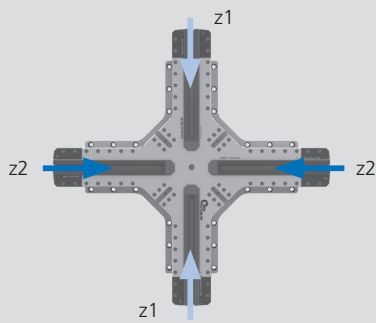


CENTCO4-MLW

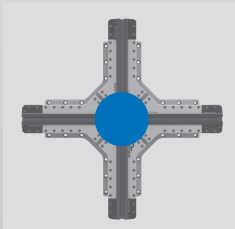
4-JAW MANUAL CHUCK

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

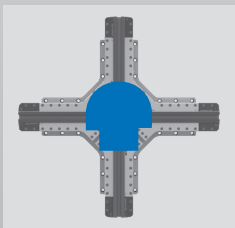


2+2 self centering + compensating clamping

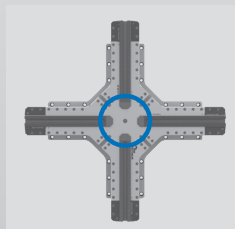
of round,



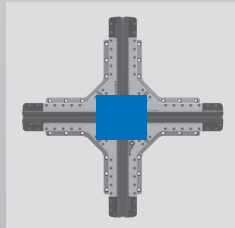
irregular shaped and



thin-walled,



square / rectangular workpieces



Examples for workpieces

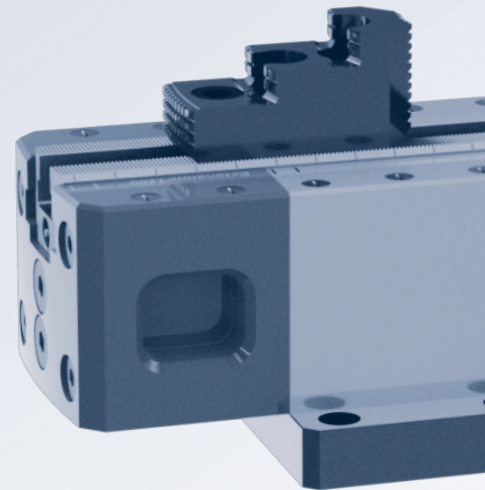
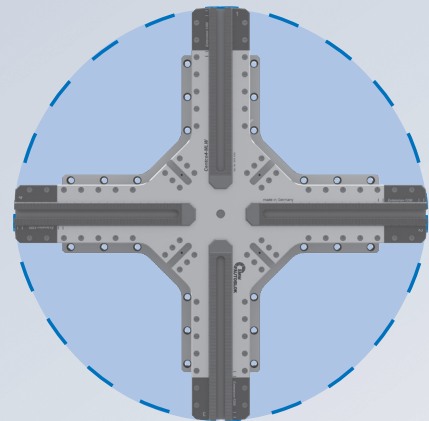


POSSIBLE COST SAVINGS

calculation example

3-jaw chuck		Centco4-MLW	
standard jaw chuck	€/set	Standard jaws	€/set
1x Special jaws	1.500,-€	1x Standard jaws	500,-€
1x Standard jaws	375,-€	1x Standard jaws	500,-€
1x Special jaws	1.750,-€	1x Standard jaws	500,-€
1x Special jaws	2.000,-€	1x Standard jaws	500,-€
Total at 1 set of jaws respectively	5.625,-€	Total at 1 set of jaws respectively	2000,-€
Cost savings at 1 set of jaws	0 €	Cost savings at 1 set of jaws	3.625,-€

- **Weight-optimised chuck body**
- with recesses for best accessibility



**Direct pressure
lubrication system**

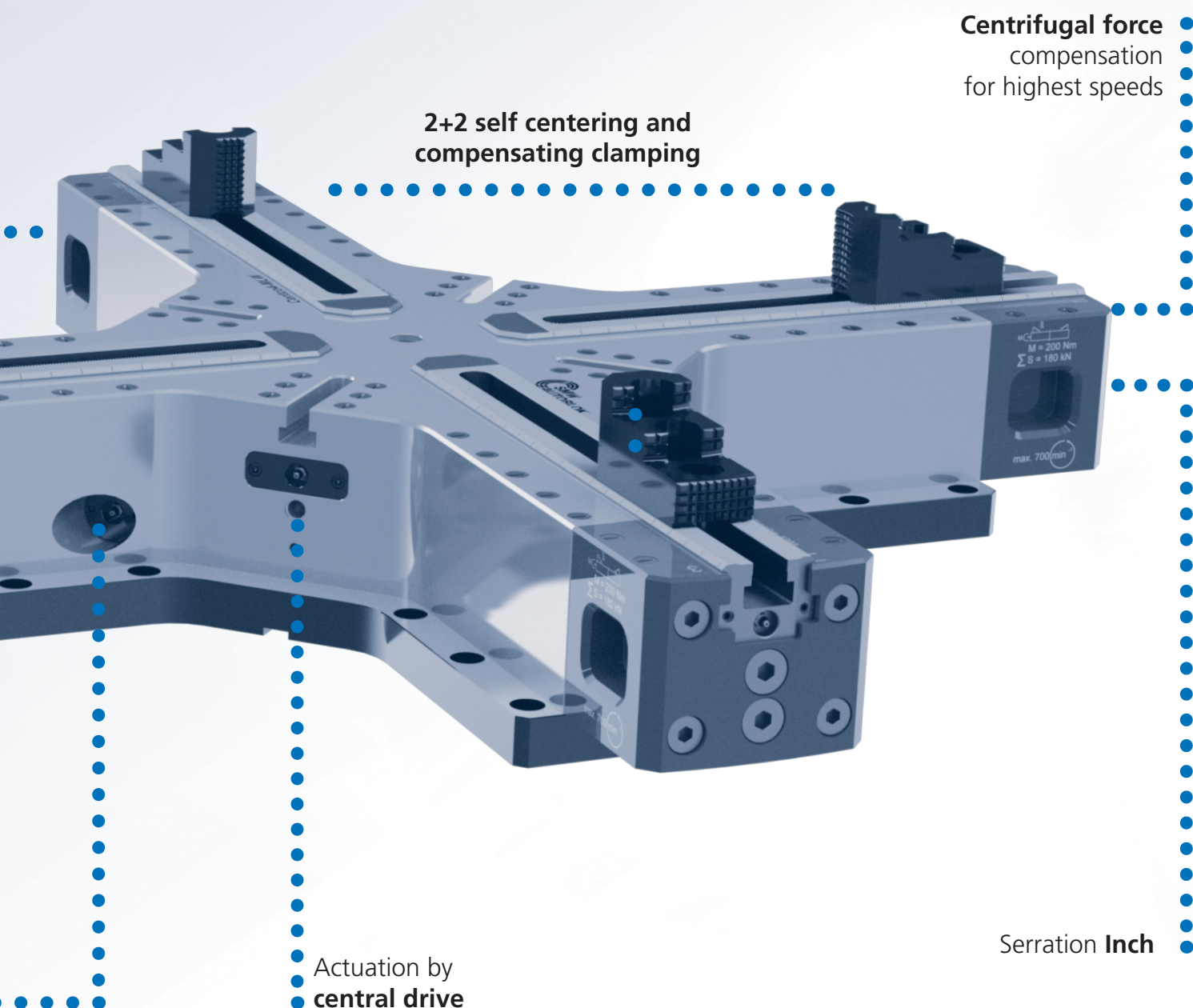
2+2 self centering-compensating clamping: Work pieces need to be centered when clamping. When using 3 jaw chucks, this is carried out via a mechanical synchronizing of the 3 jaws to one common center. A self centering 4 jaw chuck which is used for different work piece geometries is creating 2 separate centers via the 2 opposed jaw sets. The mechanical synchronizing is causing a redundant positioning, which affects the clamping negatively.

The **Centco4-MLW** with its 2+2 self centering-compensating clamping centers the work piece with 2 independent axes. The self centering 2 axes work independent from each other, and thus can reach one common center. This works with any work piece geometry or tolerance. The grip force is only built up, after both jaw axes have reached their common center. This guaranties a very sensitive and high accurate clamping at any grip force and best machining results.

Weight optimized chuck body: The outer geometry of the chuck body has recesses between the base jaws. This improves the radial accessibility with live tools and reduces the inertia and weight. The machine can accelerate and decelerate quicker and more energy efficient, and the machine spindle can carry higher work piece weights.

Centrifugal compensation: The rotation of a chuck results in centrifugal forces that act onto the master jaws and the top jaws. It reduces the Static grip force, and thus reduces the dynamic chip removal. The centrifugal force system of the **Centco4 MLW** reduces this effect, and thus improves the dynamic chip removal, the safety and the roundness of the work pieces.

Direct pressure lubrication system: In a pressure lubrication system all loaded areas are directly lubricated via direct channels. Used lubricant is directly replaced by new lubricant. Compared to open lubrication systems it reduced the amount of lubricant needed, increases the lubrication intervals and avoids tribo corrosion.



2+2 self centering and compensating clamping

Centrifugal force compensation for highest speeds

Serration Inch

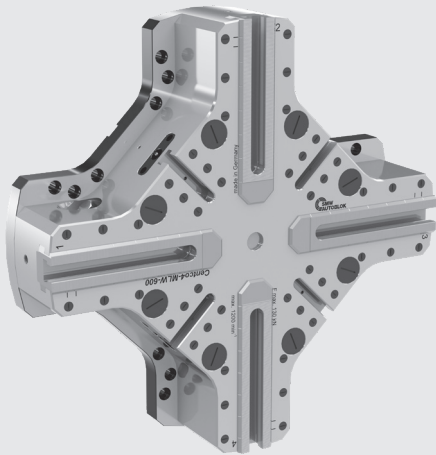
Actuation by central drive

Centco4-MLW-D

INCH
SERRATION

4-jaw manual chuck

- 2+2 self centering
- Independent self centering clamping in 2 axis
- Weight-optimized chuck body



Application/customer benefits

- Independent self centering clamping in 2 axis via 1 central, manual actuating mechanism
- Mechanical centering of the workpiece
- Clamping of every workpiece geometry possible
- Weight-optimized chuck body
- Less workpiece deformation compared to 3-jaw chucks
- Long lifetime due to case hardened parts
- Large range of standard top jaws
- Suitable for OD and ID clamping
- Fixed jaw for stationary processing

Technical features

- Centrifugal force compensation
- Optimized lubrication system

Standard equipment

4-jaw manual chuck,
8 pieces T-nuts and bolts
Actuation wrench

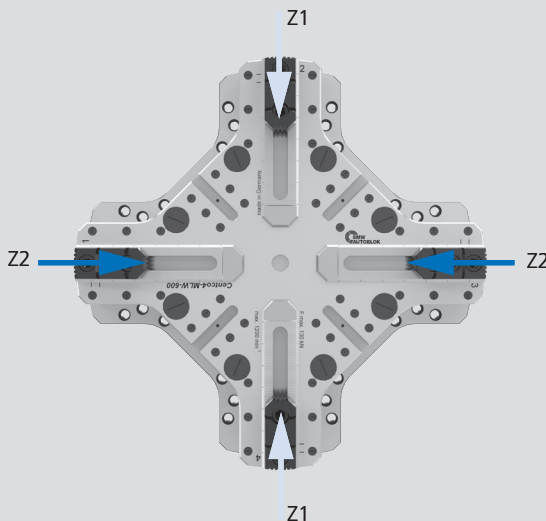
Ordering example

Centco4-MLW-D-600-4

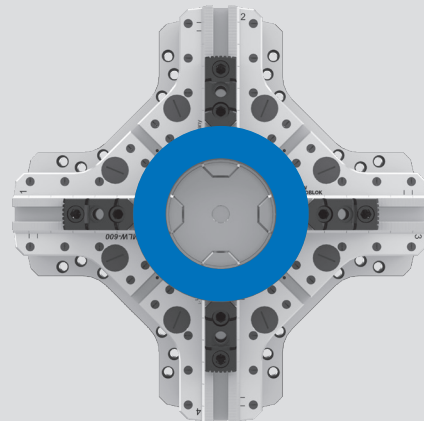
Function / Application examples

2+2 self centering and compensating clamping*

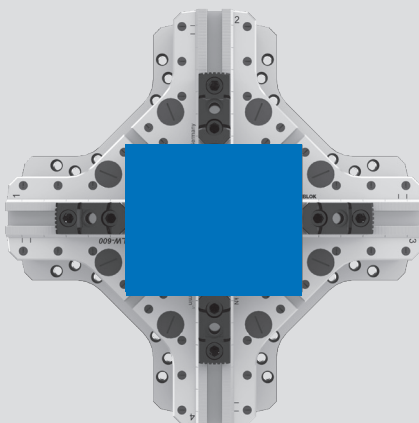
In the beginning the jaw pairs **Z1** + **Z2** only apply a centering force that is necessary to center the workpiece. Only if both jaw pairs **Z1** and **Z2** are in contact with the workpiece, the clamping force necessary for machining is applied.



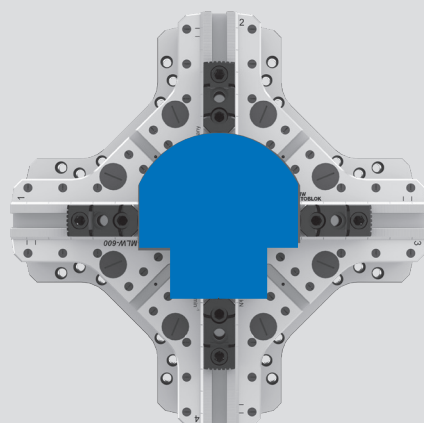
2+2 self centering clamping of round or thin-walled workpieces



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**

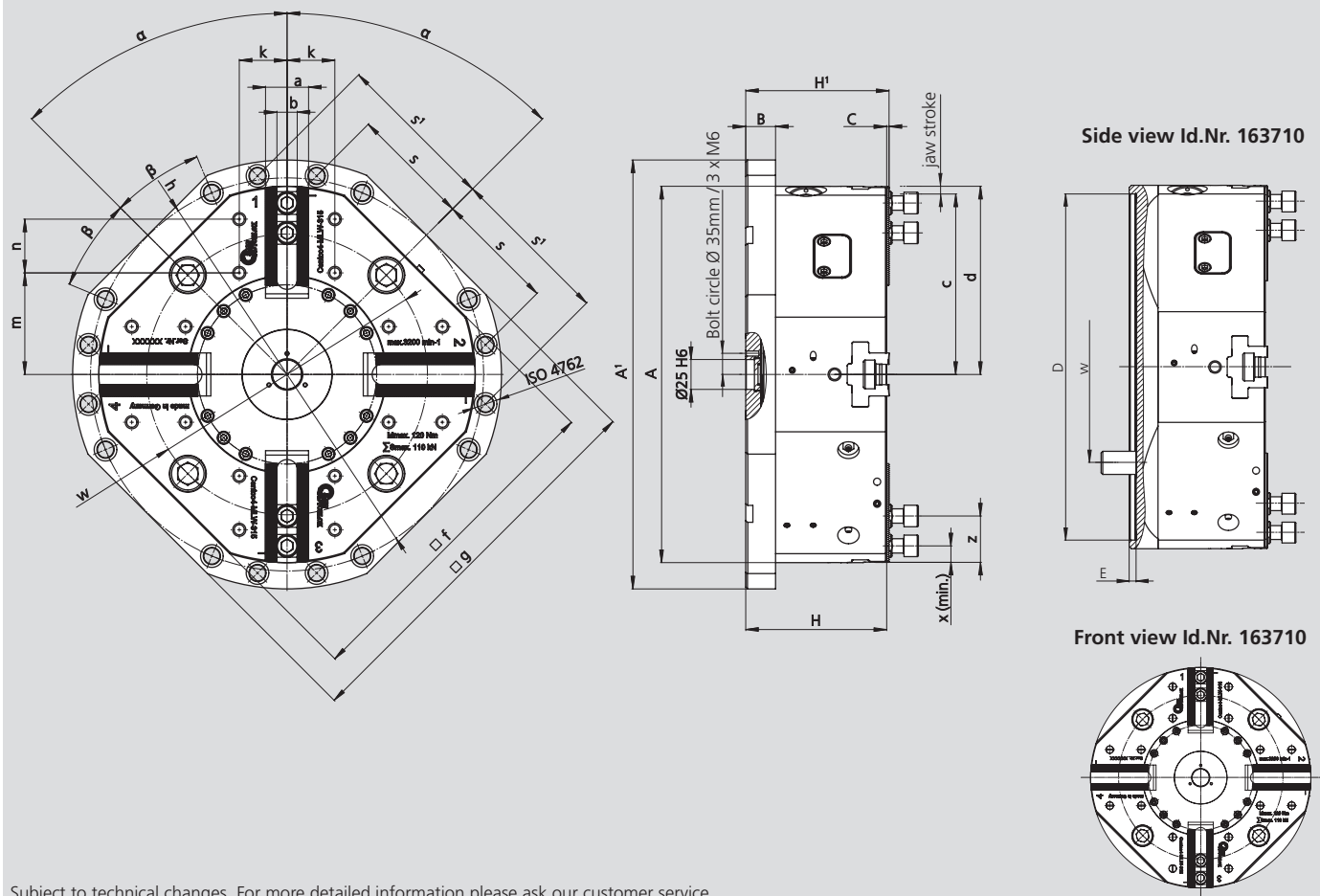
4-jaw manual chuck Ø 315 mm

- 2+2 self centering
- Independent self centering clamping in 2 axis
- Weight-optimized chuck body

Centco4-MLW-D

INCH
SERRATION

0



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

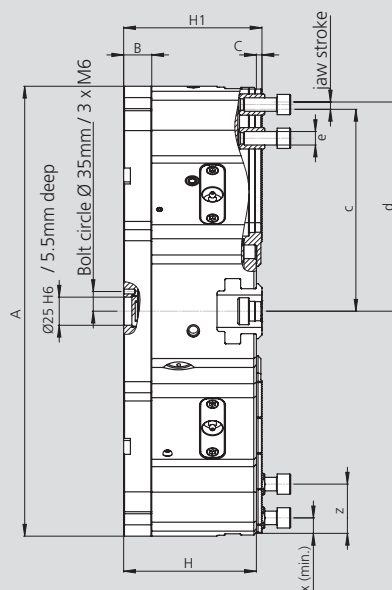
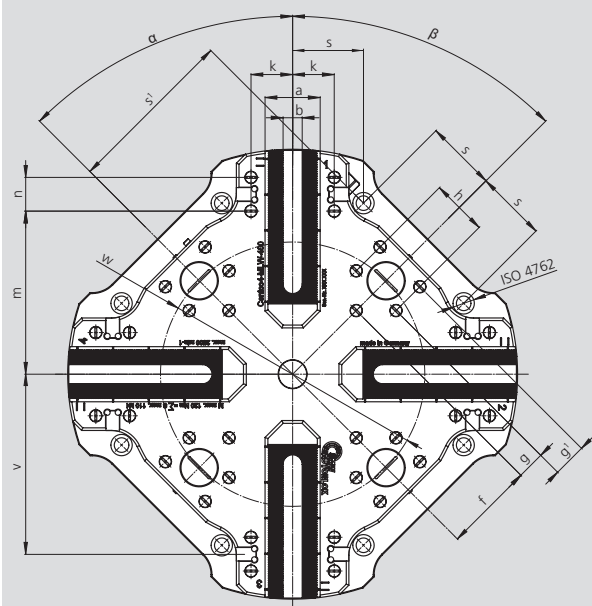
SMW-AUTOBLOK Type Centco4-MLW-D Id. No.			315-4 163780	315-4-Z300 163710
Outside diameter	A	mm	315	315
Outside diameter base plate	A ¹	mm	359	-
Base plate height	B	mm	25	-
	C	mm	2	2
Mounting	H6	mm	-	300
	E	mm	-	6
Chuck height	H	mm	118	118
	H1	mm	120	120
Jaw width	a	mm	36	36
Slot width	H8	mm	17	17
Min.	c	mm	151	151
Max.	d	mm	157.5	157.5
Bolt ISO4762-12.9	e	mm	M12	M12
	f	mm	280	280
	g	mm	330	-
	h	mm	164.5	-
	k	mm	40	40
	m	mm	85	85
	n	mm	45	45
	s/s ¹	mm	63 / 100	-
	w	mm	235 / 4 x 90°	235 / 4 x 90°
Min.	x	mm	6	6
Min. / max.	z	mm	25 / 73.5	25 / 73.5
	α	mm	45	-
	β	deg.	22.5	-
Serration		inch	1/16" x 90°	1/16" x 90°
Max. speed		min ⁻¹	3200	3200
Max. total clamping force		kN	110	110
At max. actuating torque (Md)		Nm	120	120
Stroke per jaw		mm	6.5	6.5
Compensation stroke per jaw		mm	5	5
Weight (without jaws)		kg	59.4	53.5
Moment of inertia		kg-m ²	0.76	0.65

Centco4-MLW-D

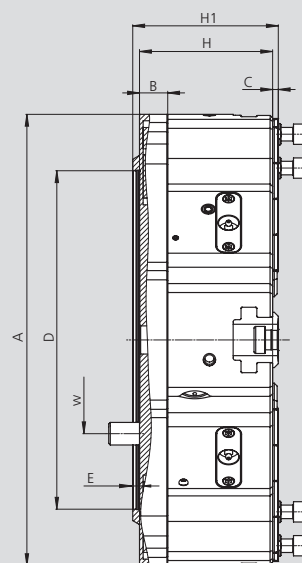
INCH
SERRATION

4-jaw manual chuck Ø 400 mm

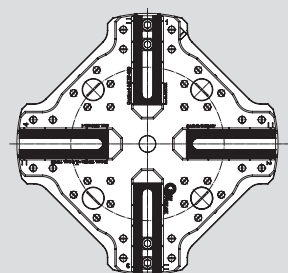
- 2+2 self centering
- Independent self centering clamping in 2 axis
- Weight-optimized chuck body



Side view Id.Nr. 163306



Front view Id.Nr. 163306



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

SMW-AUTOBLOK Type Centco4-MLW-D Id. No.			400-4 163180	400-4-Z300 163306
Outside diameter	A	mm	400	400
Base plate height	B	mm	25	25
	C	mm	5	5
Mounting	H6 D	mm	-	300
	E	mm	-	6
Chuck height	H	mm	118	118
	H1	mm	123	129
Jaw width	a	mm	49	49
Slot width	H8 b	mm	17	17
Min.	c	mm	179.5	179.5
Max.	d	mm	186	186
Bolt ISO4762-12.9	e	mm	M12	M12
	f	mm	80	80
	g	mm	25	25
	g¹	mm	30	30
	h	mm	50	50
	k	mm	37	37
	m	mm	145	145
	n	mm	30	30
	s/s¹	mm	63 / 152.1	-
	v1	mm	160	160
	w	mm	235	235
Min.	x	mm	6	6
Min. / max.	z	mm	25 / 115	25 / 115
	α	deg.	45	45
	β	deg.	45	45
Serration		inch	1/16" x 90°	1/16" x 90°
Max. speed		min ⁻¹	2500	2500
Max. total clamping force		kN	110	110
At max. actuating torque (Md)		Nm	120	120
Stroke per jaw		mm	6.5	6.5
Compensation stroke per jaw		mm	5	5
Weight (without jaws)		kg	77	77
Moment of inertia		kg-m ²	1.3	1.3

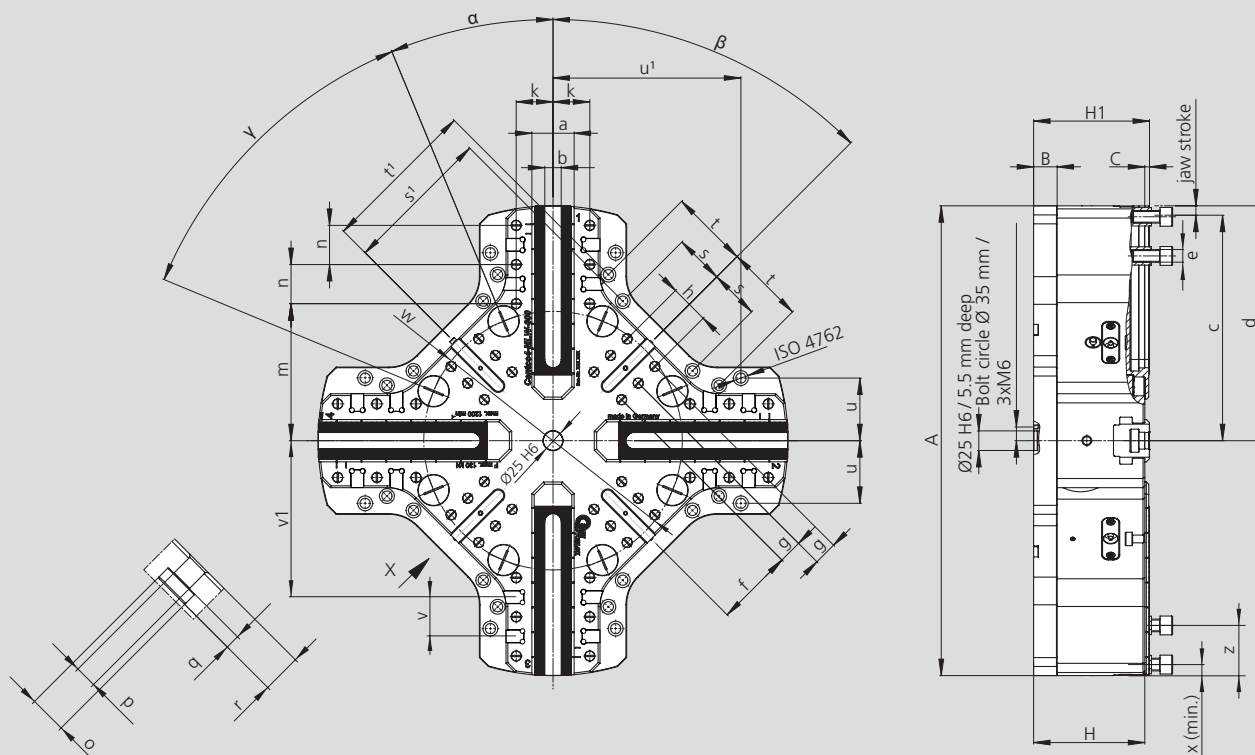
4-jaw manual chuck Ø 600 - 750 mm

- 2+2 self centering
- Independent self centering clamping in 2 axis
- Weight-optimized chuck body

Centco4-MLW-D

INCH
SERRATION

0



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

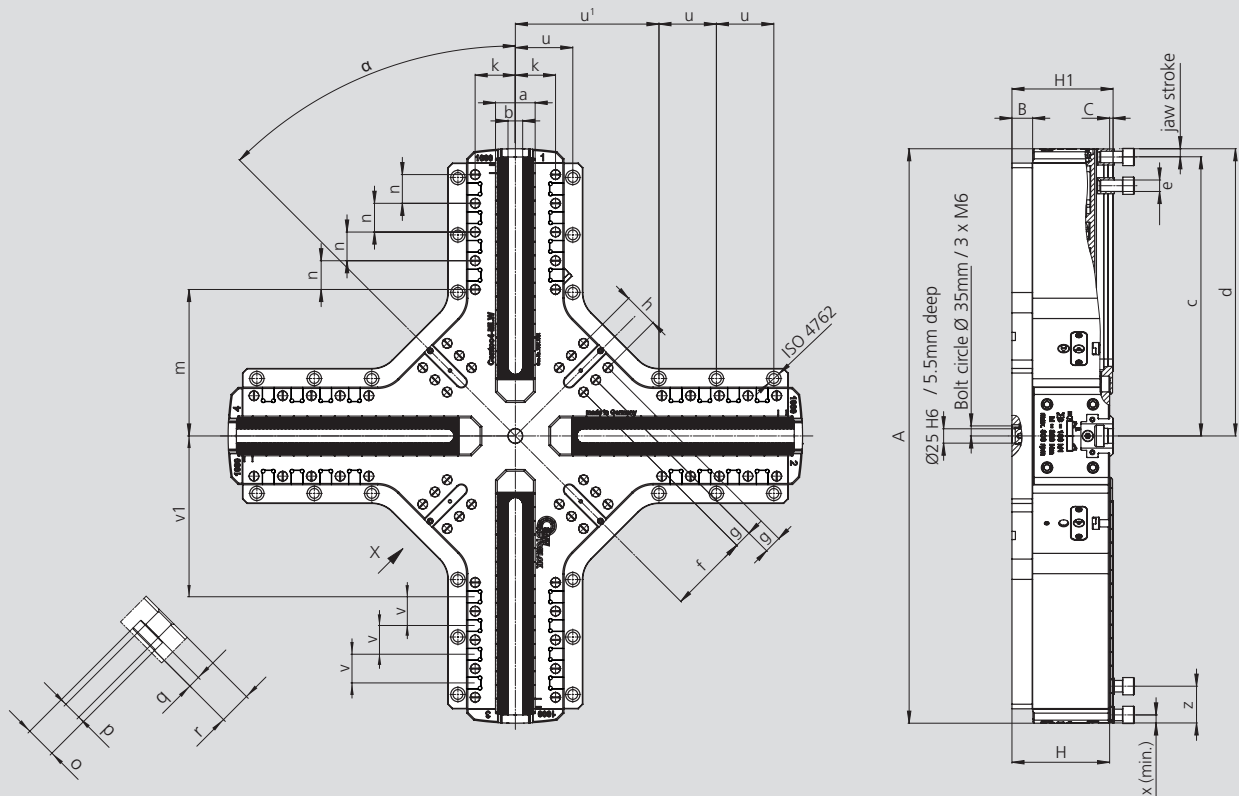
SMW-AUTOBLOK Type Centco4-MLW-D			600-4 163210	750-4 163240
Id. No.				
Outside diameter	A	mm	600	750
Base plate height	B	mm	30	30
	C	mm	6	6
Chuck height	H	mm	142	142
	H1	mm	148	148
Jaw width	a	mm	54	54
Slot width	b	mm	21	21
Jaw position min.	c	mm	288	363
Jaw position max.	d	mm	300	375
Bolt ISO4762-12.9	e	mm	M16	M16
	f	mm	99	99
	g	mm	2 x 30	2 x 30
	h	mm	50	50
	k	mm	47	47
	m	mm	175	200
	n	mm	2 x 50	3 x 50
T-slot width	o	mm	24	24
T-slot width	p	mm	14	14
Height of width o	q	mm	9.2	9.2
Total depth T-slot	r	mm	25	25
	s/s'	mm	63 / 189	63 / 189
	t/t'	mm	100 / 200	100 / 200
	u/u'	mm	80 / 240	80 / 240
	v	mm	50	50
	v1	mm	200	225
	w	mm	330.2	330.2
Min.	x	mm	12.5	12.5
Min. / max.	z	mm	25 / 177	25 / 245
	α	deg.	17.5	17.5
	β	deg.	45	45
	γ	deg.	45	45
Serration		inch	1/16"x 90°	1/16"x 90°
Max. speed		min ⁻¹	1200	1000
Max. total clamping force		kN	130	130
at max. actuating torque (Md)		Nm	200	200
Stroke per jaw		mm	12	12
Compensation stroke per jaw		mm	10	10
Weight (without jaws)		kg	165	201
Moment of inertia		kg-m ²	5.5	9.83

Centco4-MLW-D

INCH
SERRATION

4-jaw manual chuck Ø 1000 - 1400 mm

- 2+2 self centering
- Independent self centering clamping in 2 axis
- Weight-optimized chuck body



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

SMW-AUTOBLOK Type Centco4-MLW-D Id. No.			1000-4 163270	1200-4 163470	1400-4 163520
Outside diameter	A	mm	1000	1200	1400
Base plate height	B	mm	36	36	36
	C	mm	6	6	6
Chuck height	H	mm	170	170	170
	H1	mm	176	176	176
Jaw width	a	mm	69	69	69
Slot width	H8 b	mm	25.5	25.5	25.5
Min.	c	mm	486	586	686
Max.	d	mm	500	600	700
Bolt ISO4762-12.9	e	mm	M20	M20	M20
	f	mm	138	138	138
	g	mm	2 x 30	2 x 30	2 x 30
	h	mm	60	60	60
	k	mm	70	70	70
	m	mm	255	255	255
	n	mm	4 x 50	6 x 50	8 x 50
T-slot width	o	mm	30	30	30
T-slot width	p	mm	18	18	18
Height of width o	q	mm	12.2	12.2	12.2
Total depth T-slot	r	mm	30	30	30
	u/u¹	mm	100 / 250	100 / 250	100 / 250
	v	mm	50	50	50
	v¹	mm	280	280	280
Min.	x	mm	14	14	14
Min. / max.	z	mm	50 / 350	50 / 450	50 / 550
	α	deg.	45	45	45
Serration		inch	3/32" x 90°	3/32" x 90°	3/32" x 90°
Max. speed		min⁻¹	800	700	600
Max. total clamping force		kN	180	180	180
at max. actuating torque (Md)		Nm	320	320	320
Stroke per jaw		mm	14	14	14
Compensation stroke per jaw		mm	12	12	12
Weight (without jaws)		kg	410	480	530
Moment of inertia		kg·m²	36.4	55.6	80

- Ordering review / equipment review
- Jaws*

INCH
SERRATION

Ordering review

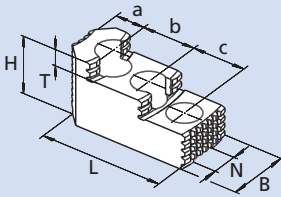
SMW-AUTOBLOK Type Centco4-MLW-D	315-4	400-4	600-4	750-4	1000-4	1200-4	1400-4
Mounting	Z300	Z300					
Id. No.	163780 163710	163180 163306	163210	163240	163270	163470	163520

Equipment review

SMW-AUTOBLOK - Assembling tool	315-4	400-4	600-4	750-4	1000-4	1200-4	1400-4
Id. No.	210861			210860			

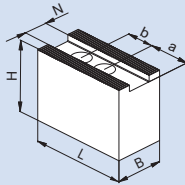
Jaws

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



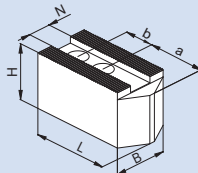
Centco4-MLW-D	315-4	400-4	600-4	750-4	1000-4	1200-4	1400-4
Jaw type	MHB-D 200	MHB-D 200	MHB-D 251	MHB-D 251	MHB-D 500	MHB-D 500	MHB-D 500
Id. No.	12082038	12082038	12083038	12083038	12084548	12084548	12084548
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
B	40	40	45	45	60	60	60
H	45	45	56	56	75	75	75
L	82	82	106.2	106.2	140.8	140.8	140.8
T	10.5	10.5	13.5	13.5	19	19	19
N	17	17	21	21	25.5	25.5	25.5
a	19	19	26	26	38	38	38
b	23	23	30	30	38	38	38
c	23	23	30	30	38	38	38
kg / set	2.3	2.3	2.9	2.9	9.5	9.5	9.5

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



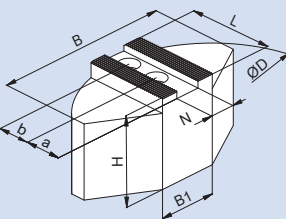
Centco4-MLW-D	315-4	400-4	600-4	750-4	1000-4	1200-4	1400-4
Jaw type	MWB-D 200	MWB-D 200	MWB-D 250	MWB-D 250	MWB-D 400	MWB-D 400	MWB-D 400
Id. No.	5318837	5318837	5319680	5319680	5319831	5319831	5319831
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
B	40	40	50	50	60	60	60
H	60	60	80	80	90	90	90
L	90	90	120	120	170	170	170
N	17	17	21	21	25.5	25.5	25.5
a	43	43	62	62	90	90	90
b	22	22	28	28	35	35	35
kg / set	4.1	4.1	9.2	9.2	21.6	21.6	21.6

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



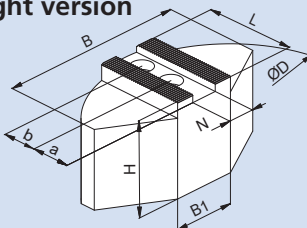
Centco4-MLW-D	315-4	400-4	600-4	750-4	1000-4	1200-4	1400-4
Jaw type	AWB-D 200	AWB-D 200	AWB-D 250	AWB-D 250	AWB-D 400	AWB-D 400	AWB-D 400
Id. No.	5318838	5318838	5319681	5319681	5319834	5319834	5319834
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
B	40	40	50	50	60	60	60
H	40	40	50	50	60	60	60
L	110	110	120	120	170	170	170
N	17	17	21	21	25.5	25.5	25.5
a	53	53	70	70	115	115	115
b	22	22	28	28	35	35	35
kg / set	2.7	2.7	5.4	5.4	14.5	14.5	14.5

SBS-D (INCH SERRATION) Soft pie jaws



Centco4-MLW-D	315-4	400-4	600-4	750-4	1000-4	1200-4	1400-4
Jaw type	SBS-D 200	SBS-D 200	SBS-D 600/4	SBS-D 600/4	SBS-D 1200/4	SBS-D 1200/4	SBS-D 1200/4
Id. No.	5318839	5318839	5322250	5322250	5322251	5322251	5322251
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°	3/32" x 90°
B	140	140	330	330	500	500	500
B1	64	64	50	50	60	60	60
D	200	200	190	190	445	445	445
H	60	60	85	85	85	85	85
L	70	70	140	140	155	155	155
N	17	17	21	21	25.5	25.5	25.5
a	35	35	75	75	85	85	85
b	22	22	29	29	35	35	35
kg / set	10.3	10.3	56.3	56.3	85.6	85.6	85.6

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



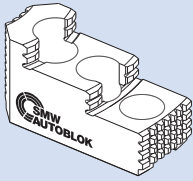
Centco4-MLW-D	315-4	400-4	600-4	750-4	1000-4	1200-4	1400-4
Jaw type	SBA-D 200	SBA-D 200	SBS-A 600/4	SBS-A 600/4	SBA-D 1200/4	SBA-D 1200/4	SBA-D 1200/4
Id. No.	5318840	5318840	5322254	5322254	5322255	5322255	5322255
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
B	120	120	330	330	500	500	500
B1	40	40	50	50	60	60	60
D	200	200	190	190	445	445	445
H	58	58	85	85	85	85	85
L	72.5	72.5	140	140	155	155	155
N	17	17	21	21	25.5	25.5	25.5
a	35	35	75	75	85	85	85
b	22	22	29	29	35	35	35
kg / set	3.7	3.7	20.1	20.1	30.3	30.3	30.3

* SMW-AUTOBLOK is recommending not to clamp any diameters, that are larger than the chuck O.D.
For more detailed information please ask our customer service.

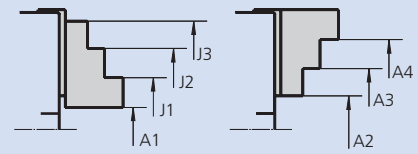
SMW-AUTOBLOK Jaws-catalog
Request or download:
www.smw-autoblok.de

MHB-D (INCH SERRATION)

Hard, reversible stepped top jaws



Clamping ranges



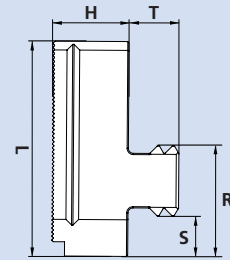
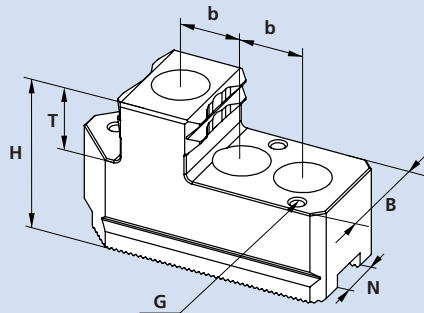
Centco4-MLW-D	315	400	600	750	1000	1200	1400
Jaw type	MHB-D200	MHB-D200	MHB-D200	MHB-D200	MHB-D500	MHB-D500	MHB-D500
Id. No.	12082038	12082038	12083038	12083038	12084548	12084548	12084548
A1	73-216	74-299	87-458	101-609	96.5-814	96.5-1014	96.5-1214
A2	-	-	-	-	-	-	-
A3	124-266	124.5-321	178-550	236-698.5	221.5-938.5	221.5-1138.5	221.5-1338.5
A4	199-315	200-397.5	263-600	321-750*	320.5-1000*	320.5-1200*	320.5-1400*
J1	121-262	122-346	140.5-512	155-662	182.5-897	182.5-1097	182.5-1297
J2	195-315	196-400*	224.5-598	239-747.5	279.5-996	279.5-1196	279.5-1396
J3	237-315	238-400*	296.4-600*	311-750*	377-1000*	377-1200*	377-1400*

Note: min. 1 mm Residual jaw stroke
min. 1 mm Clamping stroke

* Not larger than chuck OD

GG-D (INCH SERRATION)

Hard roughing jaws



Type	Id. No.	External clamping*	Internal clamping*	B	H	L	R	S	T	G	N	b	Serration	kg / Set	SMW-AUTOBLOK Chuck
GG-D 260	5325560	76 - 314	128 - 315	36	55	100	52	11	20	M5	17	25	1/16"x90°	3.364	Centco4-MLW 315-4
GG-D 315	5325562	59 - 391	155 - 400	40	55	110	65	17	20	M8	17	25	1/16"x90°	4.184	Centco4-MLW 400-4
GG-D 400	5325564	94 - 582	194 - 600	50	60	130	64	13	22	M8	21	32,5	1/16"x90°	6.8524	Centco4-MLW 600-4
GG-D 400	5325564	100 - 731	200 - 750	50	60	130	64	13	22	M8	21	32,5	1/16"x90°	6.8524	Centco4-MLW 750-4
GG-D 500	5325565	124 - 986	239 - 1000	60	60	150	73	14,5	22	M8	25.5	40	3/32"	9.04	Centco4-MLW 1000-4
GG-D 630	5325566	95 - 1190	231 - 1200	60	60	180	83	13	22	M8	25.5	50	3/32"	11.492	Centco4-MLW 1200-4
GG-D 630	5325566	95 - 1390	231 - 1400	60	60	180	83	13	22	M8	25.5	50	3/32"	11.492	Centco4-MLW 1400-4

* Attention: The values are calculated theoretical values. SMW-AUTOBLOK is recommending not to clamp any diameters, that are larger than the chuck O.D.
If you have any questions, please do not hesitate to contact our customer service.



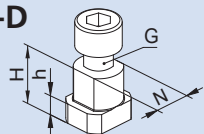
JAWS-CATALOG

Request or
download:
www.smw-autoblok.de

■ T-Nuts

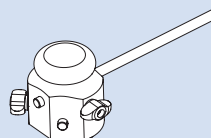
INCH
SERRATION

NST T-Nuts suitable for Centco4- MLW-D



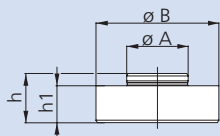
Centco4-MLW-D	315-4	400-4	600-4	750-4	1000-4	1200-4	1400-4
T-nut type	NST17	NST17	NST21	NST21	NST25	NST25	NST25
Id. No.	016021	016021	014788	014788	014812	014812	014812
N	17	17	21	21	25.5	25.5	25.5
H	23	23	27	27	29	29	29
h	9	9	10	10	11	11	11
G							
Cyl.-screw ISO 4762-12.9	M12 x 30	M12 x 30	M16 x 35	M16 x 35	M20 x 40	M20 x 40	M20 x 40
Torque Md max. (Nm) *	70	70	150	150	250	250	250

Jaw pre-positioning fixture



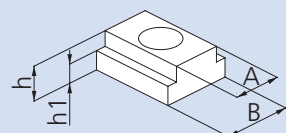
Centco4-MLW	315-4	400-4	600-4	750-4	1000-4	1200-4	1400-4
Id. No.	163518	163518	163514	163514	163515	163516	163517

Center pin



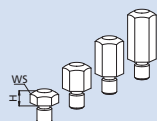
Centco4-MLW	315-4	400-4	600-4	750-4	1000-4	1200-4	1400-4
Id. No.	163239						
Ø A	25 h6						
Ø B	50 g6						
h	20						
h1	15						

Slot-nuts



Id.-No.	209210	209194	209173
A	12	14	16
B	20	20	20
h	10	10	10
h1	5.5	5.5	5.5
Id. No. Cyl.-screw (not included)	010166	010166	010166

ALB



H [mm]	SW17 / M10	SW19 / M12	SW24 / M16
10	210605	210058	210064
15	210606	210060	210065
20	210607	210061	210066
25	210608	210062	210067
30	210609	210063	210068

**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 500g
Id. No. 10731223

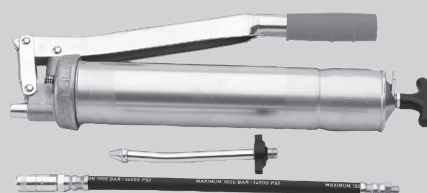
Can 1000 g
Id. No. 10731224



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

Grease gun

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



Lubrication set Id. No. 083726

Supply range

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