

# **KNCS-2G**

## **NEW GENERATION**

### Quick Jaw Change Chuck

#### **SEALED**

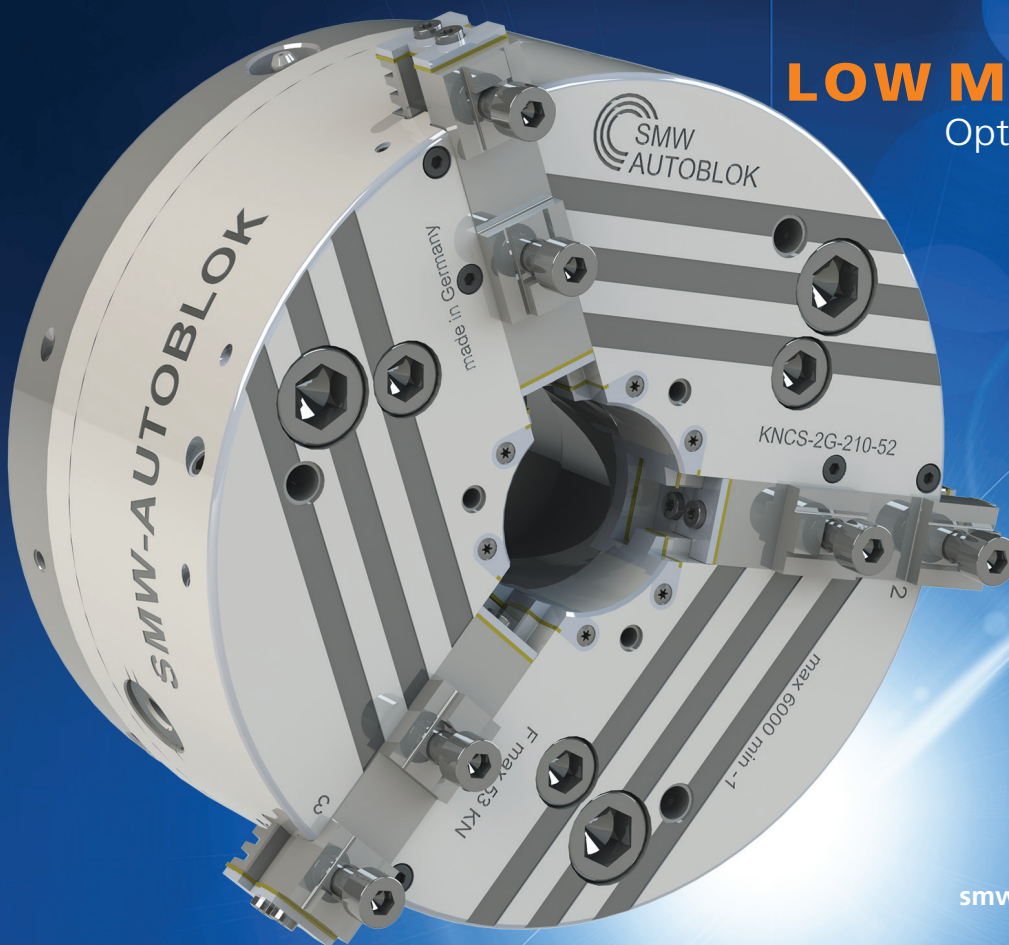
Seals in the chuck body  
and base jaws  
Protection against dust and swarf

#### **LOW MAINTENANCE**

Optimized lubrication system  
Constant clamping force

#### **FLEXIBLE**

Minimum set up times  
Maximum cost-efficiency



Video  
Technical Data  
[smw-autoblok.de/kncs-2g](http://smw-autoblok.de/kncs-2g)



# NEW GENERATION

# The most flexible production chuck in the world

## KNCS-2G

### Customer Benefits

	KNCS-N	KNCS-2G
Minimized set up times due to the quick jaw change system	■	■
Highest accuracy of the jaw change	■	■
Universal	■	■
Vertical mounting of chuck possible	■	■
Case hardened parts	■	■
Wedge bar drive	■	■
Jaw safety interlock	■	■
Sealed base jaws		■
Sealed chuck body		■
Optimized lubrication in the jaw guides		■
Low maintenance		■

### Economic and Efficiency

Example: Maintenance costs at high accumulation of dirt / coolant

	KNCS-N	KNCS-2G
Lubrication interval	every shift	every 3rd shift
Required time for lubricating	10 Min.	10 Min.
Working days/year	230	230
Required time/year	2.300 Min.	767 Min.
Machine costs/hour	€ 60.-	€ 60.-
Total costs per year	€ 2.300.-	€ 767.-
<b>Profit per year</b>	<b>at 1-shift operation</b>	<b>€ 1.533.-</b>
	<b>at 2-shift operation</b>	<b>€ 3.066.-</b>
	<b>at 3-shift operation</b>	<b>€ 4.599.-</b>

\* Longer lubrication intervals will reduce the efficiency.

# Clamping glossary

**KNCS-2G:** Evolution of the quick jaw change power chuck KNCS-N. The KNCS-2G features additional seals and an improved lubrication system for low maintenance. The chuck still offers all the advantages same as the KNCS-N. The proven wedge bar drive guarantees unmatched accuracy and rigidity. A low loss of grip force due to centrifugal force makes the chuck ideal for high speed applications. This design does not require any counterbalance weights which allows highest speeds without vibration.

**Sealing:** The KNCS-2G is sealed by seals attached to both faces of the base jaws and additional seals in the chuck body. The seals protect the chuck against penetration of dirt and swarf.

**Low Maintenance:** The lubrication system of the KNCS-2G is optimized. Additional lubrication channels and grease pockets integ-

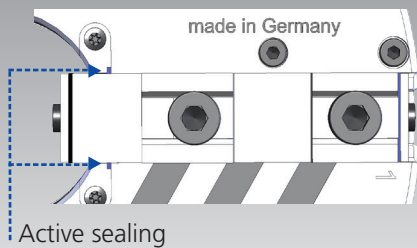
rated in the jaw guide ways ensure constant clamping force. The lubrication intervals are significantly longer reducing down times and cost for maintenance.

**Mass production:** The sealing and the new lubrication system make the KNCS-2G also suitable for mass production.

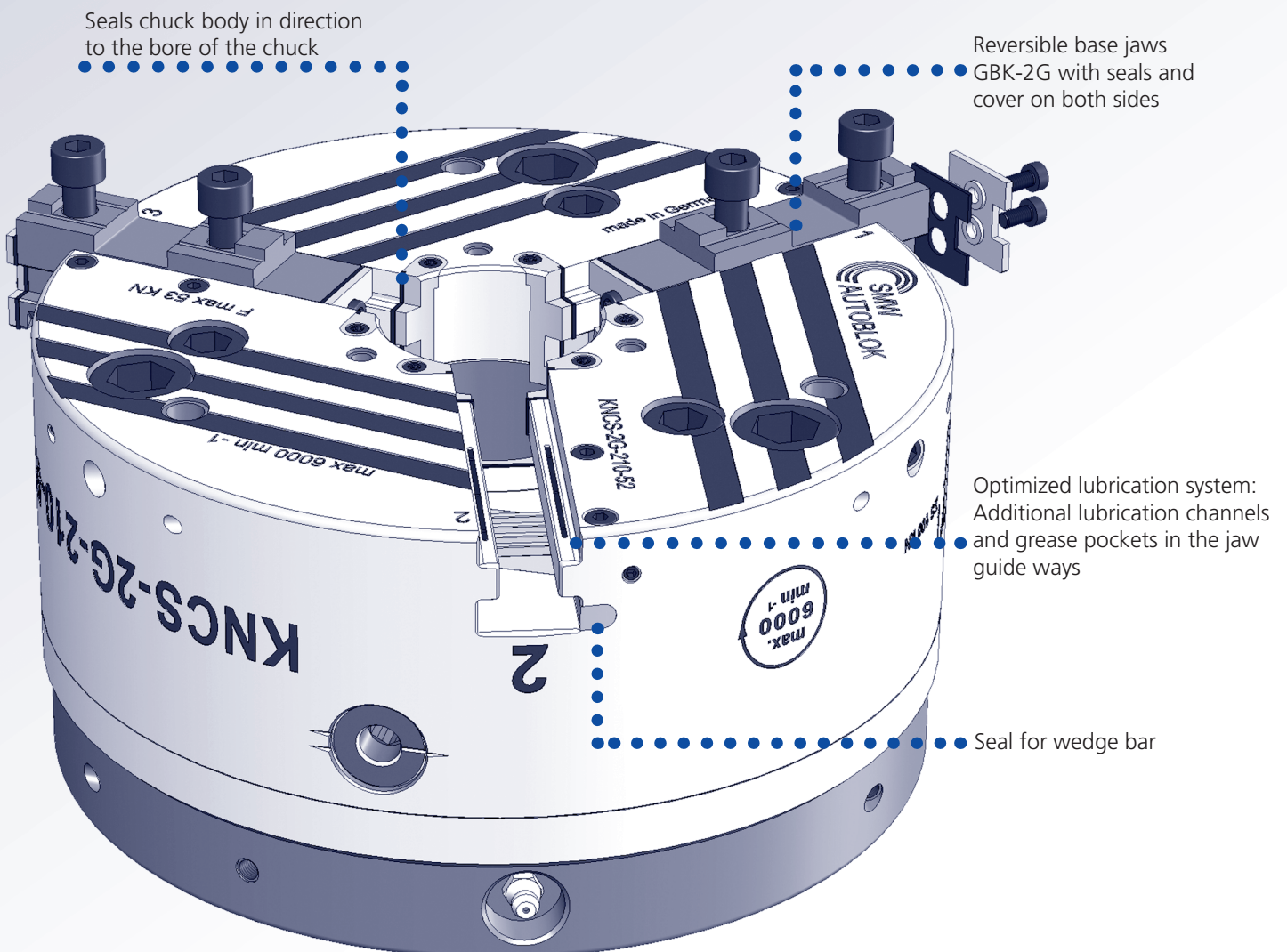
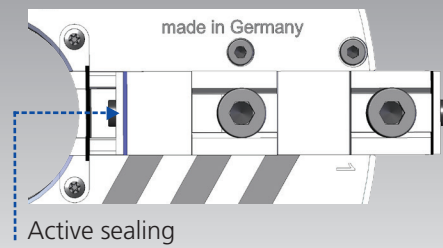
**Compatibility:** The KNCS-2G is interchangeable with the standard series of quick jaw change chucks KNCS-N. Existing master jaws still can be used without sealing. A small modification made to the master jaws and a mounting kit can upgrade existing master jaws to become 2G master jaws.

## Safe sealing in every position of the base jaw

Position base jaw 1



Position base jaw 2



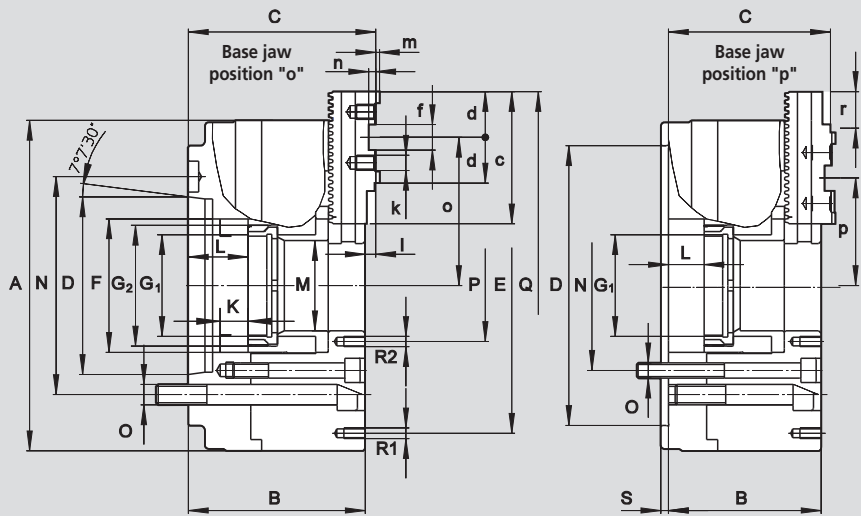
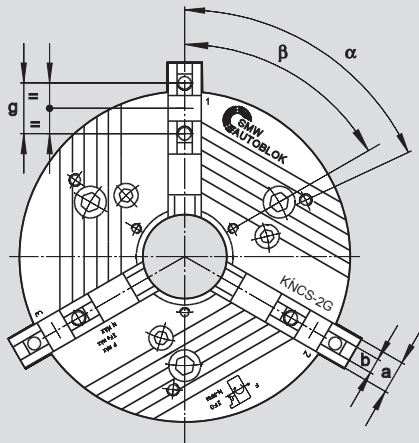
# KNCS-2G

Sealed, low maintenance and flexible

QUICK JAW CHANGE

- new generation
- Quick jaw change

Jaw position: open position for external clamping



Subject to technical changes.  
For more detailed information please ask for customer drawing.

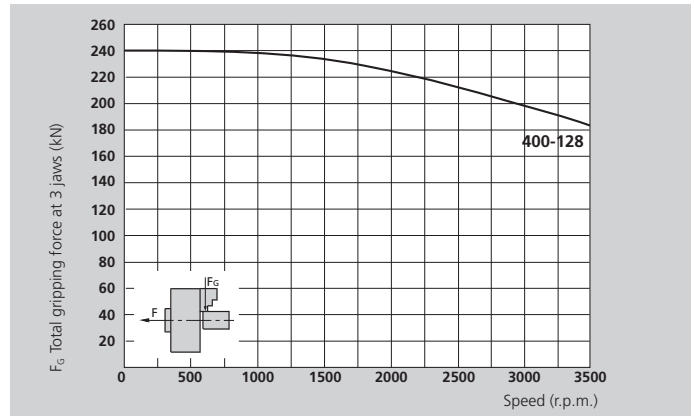
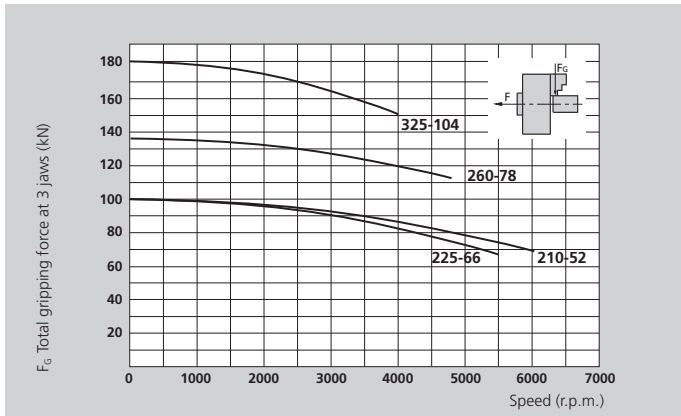
SMW-AUTOBLOK Type		210-52			225-66			260-78			
Mounting	Size	Z170	A6	A8	Z170	A6	A8	Z170	Z220	A6	A8
	A		215			225				260	
	B	105	122	124	105	122	124	120	120	137	139
	C	109.9	126.9	128.9	109.9	126.9	128.9	128.3	128.3	145.3	147.3
	D H6	170	106.39	139.73	170	106.39	139.73	170	220	106.39	139.73
	E		168			180				210	
	F		85			95				111	
Rotating ring nut/depth	G1		M60 x 1.5/16			M75 x 1.5/16				M90 x 2/20	
Piston thread/depth	G2		M75 x 2/19			M85 x 2/19				M102 x 2/23	
Piston stroke	K		22/25			22/25				25/28	
max.	L	25	42	44	25	42	44	28	28	45	47
	M		52			66				78	
Fixing bolt circle	N	133.4	133.4	171.4	133.4	133.4	171.4	133.4	171.4	133.4	171.4
Fixing bolt	O	M12	M12	M16	M12	M12	M16	M12	M16	M12	M16
	P		72			82				95	
	Q		261			271				307	
Thread/Thread depth	R1		M10/12			M10/12				M10/12	
Thread/Thread depth	R2		M6/10			M6/10				M8/16	
	S		6			6				6	
	a		22			22				26	
	b f7		10			10				12	
	c		85			85				104	
	d		33			33				36	
	f H7		20			20				20	
	g		40			40				40	
Thread/Thread depth	k		M8/13			M8/13				M12/15	
	l		4.9			4.9				8.3	
	m		2.5			2.5				3	
	n		4.5			4.5				5.5	
max./min.	o		96.6/68.3			102/69				116.6/83.6	
max./min.	p		77.6/49.3			83/50				84.6/51.6	
Base jaw tooth pitch	-		4.7			4.7				5.5	
Base jaw offset	r		28.3			33				33	
Base jaw offset	teeth		6			7				6 (5) **	
$\alpha$	deg.		60			60				60	
$\beta$	deg.		60			60				60	
Stroke per jaw at piston stroke K	mm	6.0		22	6.0		22	7.0			25
Stroke per jaw at piston stroke K max.	mm	7.0		25	7.0		25	8.0			28
max. actuating force 3-jaw chuck	kN		53			53				70	
max. total gripping force 3-jaw chuck	kN		100			100				135	
max. speed 3-jaw chuck	r.p.m.		6000			5500				4700	
Weight without jaws	kg	24	26	26	26	29	29	40	40	43	43
Moment of inertia	kg·m <sup>2</sup>		0.11			0.2				0.38	
Rec. closed center cyl. open center cyl.	Type Type		SIN-S 125/150 VNK 130-52			SIN-S 125/150 VNK 150-67			SIN-S 150/175 VNK 170-77		

\* indirect mounting

\*\* Base jaw position „o“ = 5 teeth

### Main dimensions and technical data

### For highest speeds: flat gripping force curve



The data in the diagrams refer to 3-jaw-chucks, newly maintained according to their service manuals using SMW-AUTOBLOK K05 grease. The static and dynamic gripping forces have been measured using standard soft top jaws, placed in a position not exceeding the outer diameter of the chuck.

#### ⚠ Safety advice/danger of damage:

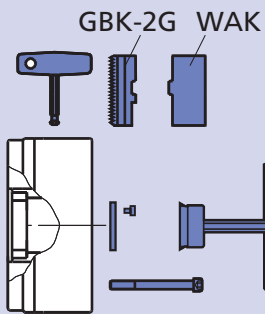
When using taller/heavier jaws and/or clamping on a bigger diameter reduce draw pull/rotating speed accordingly.

SMW-AUTOBLOK Type		325-104				400-128			
Mounting	Size	Z220	Z300	A8	A11	Z300	Z380	A11	A15
	<b>A</b>	324				400			
	<b>B</b>	130	130	149	151	140	140	161	163
	<b>C</b>	139.2	139.2	158.2	160.2	149.2	149.2	170.2	172.2
	<b>D</b> H6	220	300	139.73	196.88	300	380	196.88	285.77
	<b>E</b>	268				330			
	<b>F</b>	144				180			
Rotating ring nut/depth	<b>G1</b>	M115 x 2/22				M138 x 2/22			
Piston thread/depth	<b>G2</b>	M132 x 2/25				M160 x 2/25			
Piston stroke	<b>K</b>	25/28				32			
max.	<b>L</b>	28	28	47	49	32	32	53	55
	<b>M</b>	104				128			
Fixing bolt circle	<b>N</b>	171.4	235	171.4	235	235	330.2	235	330.2
Fixing bolt	<b>O</b>	M16	M20	M16	M20	M20	M24	M20	M24
	<b>P</b>	130				152			
	<b>Q</b>	385				452			
Thread/Thread depth	<b>R1</b>	M10/16				M12/18			
Thread/Thread depth	<b>R2</b>	M10/16				M12/18			
	<b>S</b>	6				8			
	<b>a</b>	32				32			
	<b>b</b> f7	12				12			
	<b>c</b>	115				125			
	<b>d</b>	36				43			
	<b>f</b> H7	20				26			
	<b>g</b>	40				54			
Thread/Thread depth	<b>k</b>	M12/17				M12/17			
	<b>l</b>	9.3				9.3			
	<b>m</b>	3				3			
	<b>n</b>	6				7			
max./min.	<b>o</b>	155.7/106.2				182.3/121.8			
max./min.	<b>p</b>	111.7/62.2				143.3/82.2			
Base jaw tooth pitch	-	5.5				5.5			
Base jaw offset	<b>r</b>	49.5				60.5			
Base jaw offset	teeth	9				11			
	<b>α</b>	60/35				20/9x40			
	<b>β</b>	60/35				20/9x40			
Stroke per jaw at piston stroke <b>K</b>	mm	7.0				25			
Stroke per jaw at piston stroke <b>K</b> max.	mm	8.0				8.0			
max. actuating force 3-jaw chuck	kN	95				115			
max. total gripping force 3-jaw chuck	kN	180				240			
max. speed 3-jaw chuck	r.p.m.	4000				3500			
Weight without jaws	kg	65	65	68	68	111	111	116	116
Moment of inertia	kg·m <sup>2</sup>	1.2				2.5			
Rec. closed center cyl. Rec. open center cyl.	Type	SIN-S 150/175/200 VNK 250-110				SIN-S 175/200 VNK 320-127			

# KNCS-2G

QUICK JAW CHANGE

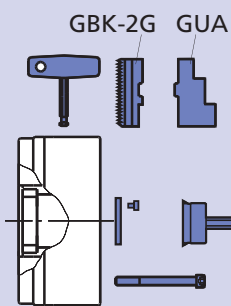
■ Ordering review



## Supply range:

Chuck + key + mounting bolts + 1 set hardened base jaws type GBK-2G + 1 set soft top jaws type WAK + set of coverplates

Spindle mounting \ Size	KNCS-2G 210-52	KNCS-2G 225-66	KNCS-2G 260-78	KNCS-2G 325-104	KNCS-2G 400-128
Centering rim small			Z 170 161551	Z 220 161571	Z 300 161591
Centering rim large	Z 170 161180	Z 170 161582	Z 220 161550	Z 300 161500	Z 380 161592
A 05					
A 06	161563	161583	161553		
A 08	161564	161584	161554	161572	
A 11				161573	161593
A 15					161594



## Supply range:

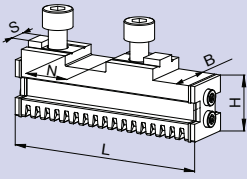
Chuck + key + mounting bolts + mounting key + 1 set hardened base jaws type GBK-2G + 1 set hardened, reversible top jaws type GUA, ground on chuck + set of coverplates

Spindle mounting \ Size	KNCS-2G 210-52	KNCS-2G 225-66	KNCS-2G 260-78	KNCS-2G 325-104	KNCS-2G 400-128
Centering rim small			Z 170 161559	Z 220 161578	Z 300 161599
Centering rim large	Z 170 161568	Z 170 161588	Z 220 161560	Z 300 161579	Z 380 161600
A 05					
A 06	161569	161589	161561		
A 08	161570	161590	161562	161580	
A 11				161581	161601
A 15					161602

# KNCS-2G

QUICK JAW CHANGE

## ■ Base jaws



### GBK-2G

#### Hardened base jaws

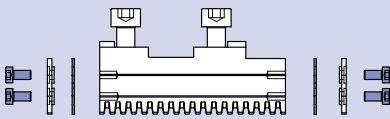
Consisting of 1 set (3 pcs.) base jaws GBK-2G with seals and mounting screws (6 pcs.) for top jaws.

KNCS-2G	210	225	260	325	400
Jaw type	GBK-2G 200	GBK-2G 200	GBK-2G 250	GBK-2G 315	GBK-2G 400
Id. No.	161520	161520	161540	161329	161605
B	22	22	26	32	32
H	29.5	29.5	37	43	43
L	85	85	104	115	125
N	20	20	20	20	26
S	10	10	12	12	12
kg/set	1.0	1.0	1.8	2.7	3.0

### Seal Kit

#### for hardened base jaws GBK-2G

Consisting of seals (6 pcs.) and mounting screws (12 pcs.)

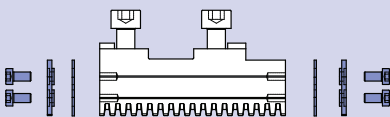


KNCS-2G	210	225	260	325	400
Jaw type	GBK-2G 200	GBK-2G 200	GBK-2G 250	GBK-2G 315	GBK-2G 400
Id. No.	205382	205382	205383	205384	205385

### Mounting Kit

#### for hardened base jaws GBK-2G

Consisting of seals (6 pcs.), covers (6 pcs.) and mounting screws (12 pcs.)



KNCS-2G	210	225	260	325	400
Jaw type	GBK-2G 200	GBK-2G 200	GBK-2G 250	GBK-2G 315	GBK-2G 400
Id. No.	205386	205386	205387	205388	205389

#### Advice:

Existing master jaws still can be used without seals. A small modification made to the master jaws and a mounting kit can upgrade existing master jaws to become 2G master jaws (instruction for the rework on request).

## Grease K05®

### Special grease for manual and power chucks

Cartridge 14 Oz. (DIN 1284)  
Grease content 500 g  
Id. No. 016440



Can 1000 g  
Id. No. 011881



- 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



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