

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.–
Profit per year	at 1-shift operation	€ 1.533.–
	at 2-shift operation	€ 3.066.–
	at 3-shift operation	€ 4.599.–

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. Also the wedge bars are protected by mechanical seals.

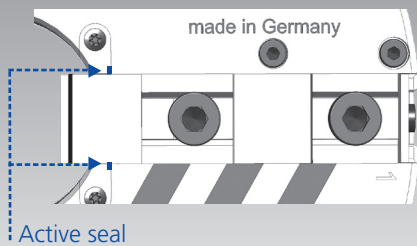
Low Maintenance: The lubrication system of the KNCS-2G is optimized. Additional lubrication channels and grease pockets integrated in the jaw guide ways ensure constant clamping force. The lubrication intervals are significantly longer reducing down times and cost for maintenance.

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

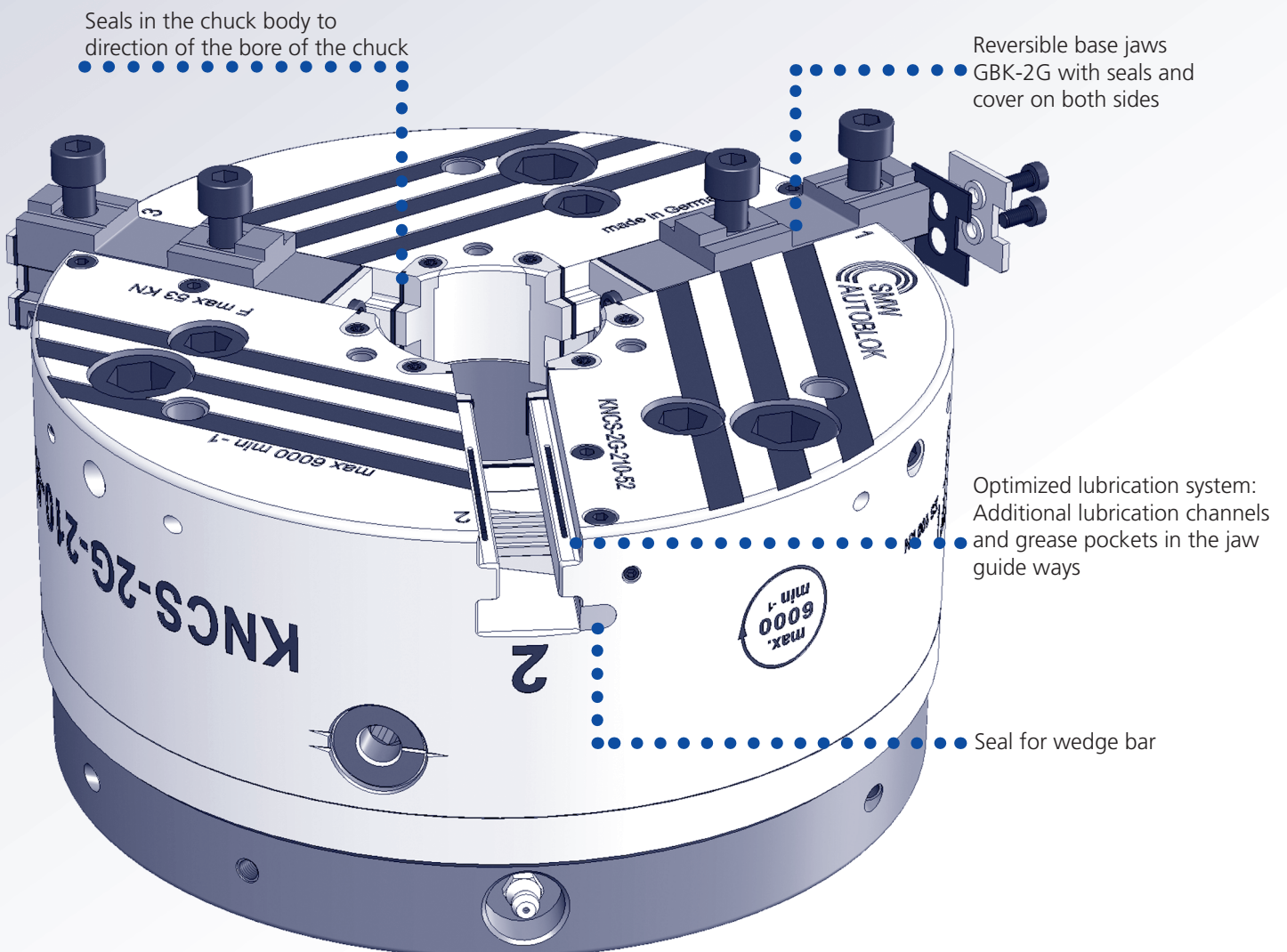
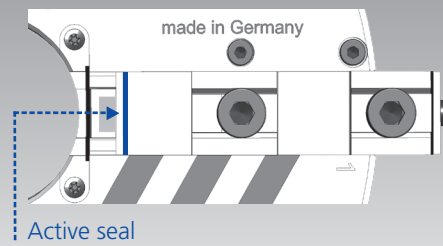
Compatibility: The KNCS-2G is interchangeable with the standard series of quick jaw change chucks KNCS-N. Existing master jaws still can be used without sealing. A small modification made to the master jaws and a mounting kit can upgrade existing master jaws to become 2G master jaws.

Safe sealing in every position of the base jaw

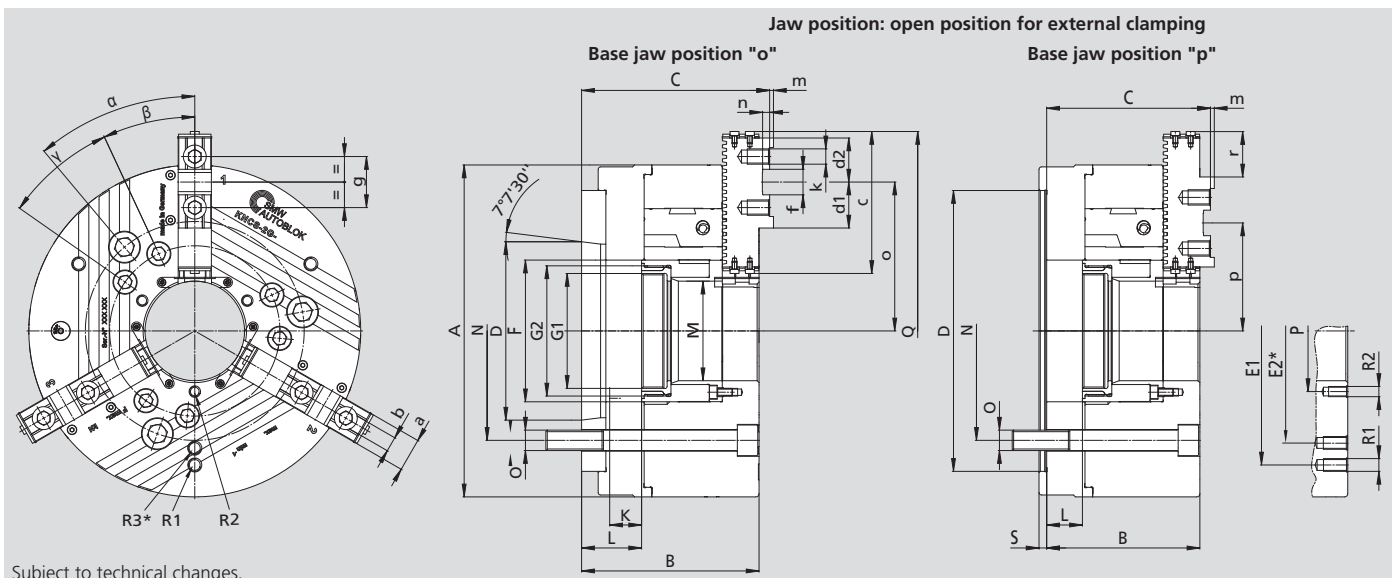
Position base jaw 1



Position base jaw 2



- Sealed
- Quick jaw change



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

* only KNCS-2G-630

Type KNCS-2G		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		268			278		313			
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		92.2			92.2		111.2			
	d1		33			33		36			
	d2		31.5			31.5		34.5			
	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) **			
	α		46			46		40			
	β		34			34		25			
	Y		-			-		30			
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 ²		0.11			0.2		0.38			
Rec. closed center cyl.	Type	SIN-S 125/150			SIN-S 125/150			SIN-S 150/175			
Rec. open center cyl.	Type	VNK-T2 130-52			VNK-T2 150-67			VNK-T2 170-77			

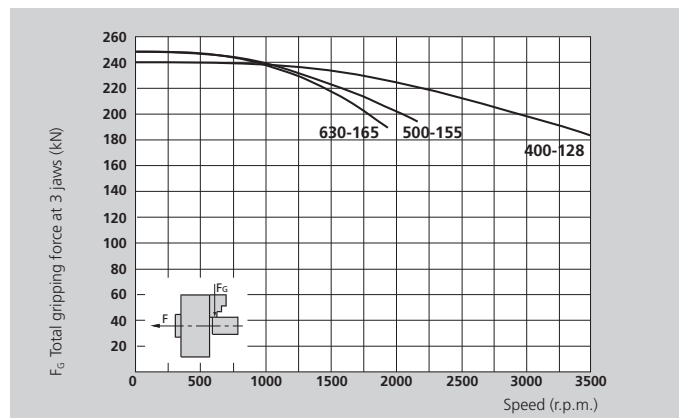
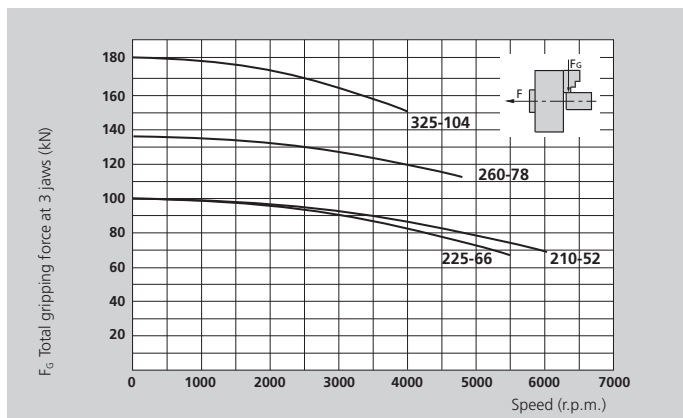
* indirect mounting

** Base jaw position „o“ = 5 teeth

- Sealed
- Quick jaw change

QUICK JAW CHANGE

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:

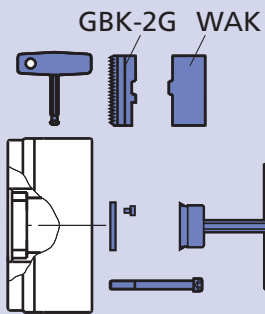
When using taller/heavier jaws and/or clamping on a bigger diameter reduce draw pull/rotating speed accordingly.

Type KNCS-2G		325-104				400-128				500-155				630-165	
Mounting	Size	Z220	Z300	A8	A11	Z300	Z380	A11	A15	Z300	Z380	A11	A15	Z380	A15
	A	324				400				500				630	
	B	130	130	149	151	140	140	161	163	174	174	195	197	174	197
	C	139.2	139.2	158.2	160.2	149.2	149.2	170.2	172.2	184	184	205	207	184	207
	D	220	300	139.73	196.88	300	380	196.88	285.77	300	380	196.88	285.77	380	285.77
	E1/E2	268				330				420				585	
	F	144				180				207				217	
Rotating ring nut/depth	G1	M115 x 2/22				M138 x 2/22				M165 x 2/25				M175 x 2/25	
Piston thread/depth	G2	M132 x 2/25				M160 x 2/25				M185 x 2/28				M195 x 2/28	
Piston stroke	K	25/28				32				42				42	
max.	L	28	28	47	49	32	32	53	55	42	42	63	65	42	65
	M	104				128				155				165	
Fixing bolt circle	N	171.4	235	171.4	235	235	330.2	235	330.2	235	330.2	235	330.2	330.2	330.2
Fixing bolt	O	M16	M20	M16	M20	M20	M24	M20	M24	M20	M24	M20	M24	M24	M24
	P	130				152				180				195	
	Q	391				461				552				650	
Thread/Thread depth	R1/R2	M10/16				M12/18				M16/25				M16/25	
Thread/Thread depth	R2	M10/16				M12/18				M12/18				M12/18	
	S	6				8				8				8	
	a	32				32				45				45	
	b f7	12				12				18				18	
	c	122.2				133.2				167.1				209.7	
	d1	36				43				53				53	
	d2	34				42				48.2				49.75	
	f H7	20				26				30				30	
	g	40				54				60				60	
Thread/Thread depth	k	M12/17				M12/17				M16/34				M16/34	
	l	9.3				9.3				10				10	
	m	3				3				4				4	
	n	6				7				9				9	
max./min.	o	155.7/106.2				182.3/121.8				225/141				270.5/179.5	
max./min.	p	111.7/62.2				143.3/82.2				164/80				170.5/79.5	
Base jaw tooth pitch	-	5.5				5.5				7				7	
Base jaw offset	r	49.5				60.5				84				91	
Base jaw offset	teeth	9				11				12				13	
α	deg.	40				40				40				40	
β	deg.	25				25				25				-	
γ	deg.	30				30				30				-	
Stroke per jaw at piston stroke K	mm	7.0				8.0				10.0				10.0	
Stroke per jaw at piston stroke K max.	mm	8.0				8.0				10.0				10.0	
max. actuating force 3-jaw chuck	kN	95				115				120				125	
max. total gripping force 3-jaw chuck	kN	180				240				250				250	
max. speed 3-jaw chuck	r.p.m.	4000				3500				2200				1700	
Weight without jaws	kg	65	65	68	68	111	111	116	116	225	225	231	231	390	398
Moment of inertia	kg·m ²	1.2				2.5				6.5				18	
Rec. closed center cyl.	Type	SIN-S 150/175/200				SIN-S 175/200				SIN-S 175/200				SIN-S 175/200	
Rec. open center cyl.	Type	VNK-T2 250-110				VNK-T2 320-127				VSG 450-165				VSG 450-165	

KNCS-2G

QUICK JAW CHANGE

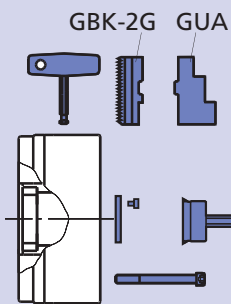
■ Ordering review



Supply range:

Chuck + key + mounting bolts + mounting key
 + 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	KNCS-2G 500-155	KNCS-2G 630-165
Centering rim small			Z 170 161551	Z 220 161571	Z 300 161591	Z 300 162106	
Centering rim large	Z 170 161180	Z 170 161582	Z 220 161550	Z 300 161500	Z 380 161592	Z 380 161980	Z 380 162120
A 05							
A 06	161563	161583	161553				
A 08	161564	161584	161554	161572			
A 11				161573	161593	162107	
A 15					161594	162108	162121

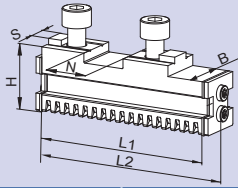


Supply range:

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	KNCS-2G 500-155	KNCS-2G 630-165
Centering rim small			Z 170 161559	Z 220 161578	Z 300 161599	Z 300 162109	
Centering rim large	Z 170 161568	Z 170 161588	Z 220 161560	Z 300 161579	Z 380 161600	Z 380 162110	Z 380 162122
A 05							
A 06	161569	161589	161561				
A 08	161570	161590	161562	161580			
A 11				161581	161601	162111	
A 15					161602	162112	162123

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.

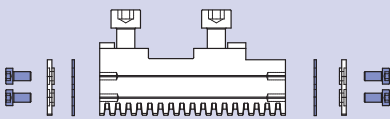
KNCS-2G	210	225	260	325	400	500	630
Jaw type	GBK-2G 200	GBK-2G 200	GBK-2G 250	GBK-2G 315	GBK-2G 400	GBK-2G 500	GBK-2G 630
Id. No.	161520	161520	161540	161329	161605	161843	161846
B	22	22	26	32	32	45	45
H	29.5	29.5	37	43	43	57	57
L1	82	82	101	112	123	157.5	199.5
L2 *	92.2	92.2	111.2	122.2	133.2	167.1	209.7
N	20	20	20	20	26	30	30
S	10	10	12	12	12	18	18
kg/set	1.0	1.0	1.8	2.7	3.0	7.7	9.5

* Dimension incl. seals, cover and screws

Seal Kit

for hardened base jaws GBK-2G

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

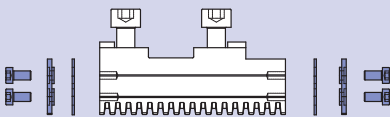


KNCS-2G	210	225	260	325	400	500	600
Jaw type	GBK-2G 200	GBK-2G 200	GBK-2G 250	GBK-2G 315/400	GBK-2G 315/400	GBK-2G 500	GBK-2G 630
Id. No.	205382	205382	205383	205384	205384	206915	206915

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	500	630
Jaw type	GBK-2G 200	GBK-2G 200	GBK-2G 250	GBK-2G 315/400	GBK-2G 315/400	GBK-2G 500	GBK-2G 630
Id. No.	205386	205386	205387	205388	205388	206916	206916

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).

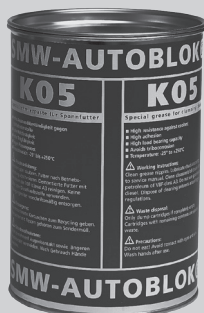
Grease K05®

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

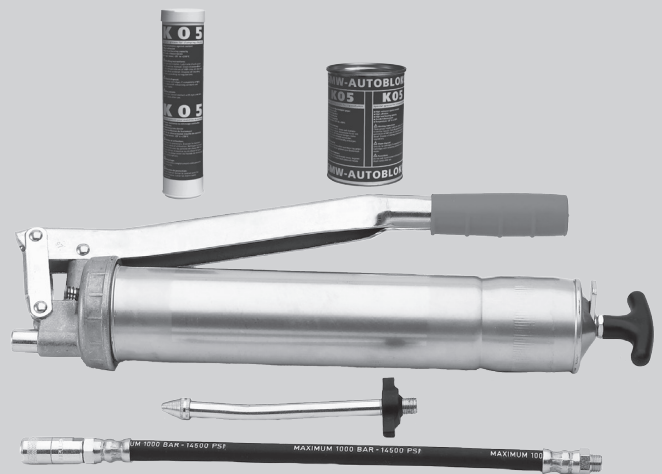


- High adhesion
- High resistance against coolant
- High load bearing capacity
- Low friction coefficient
- High gripping force
- Avoids tribocorrosion

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