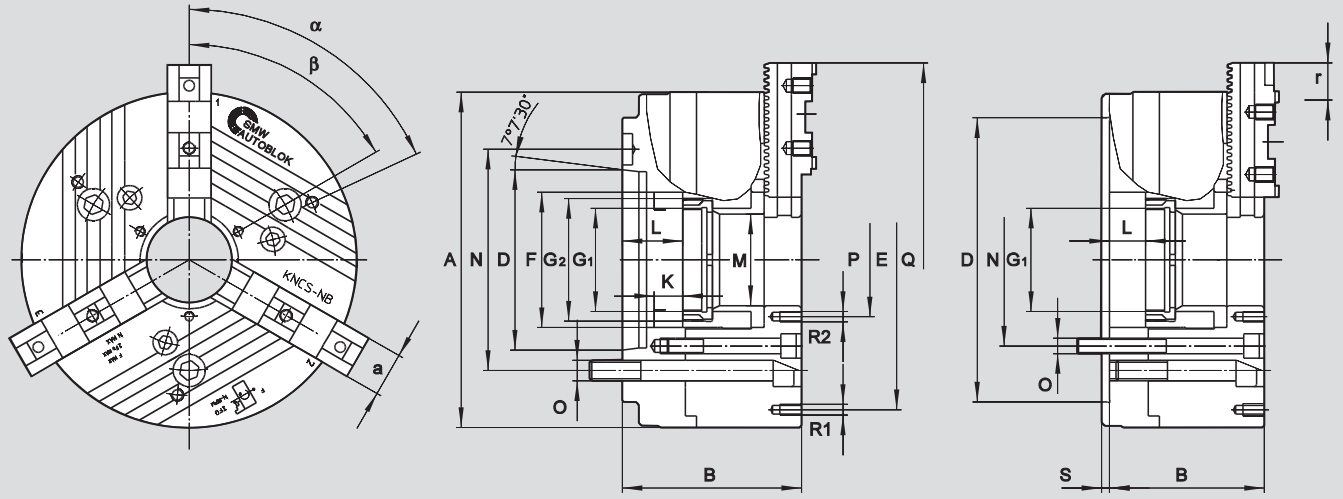
KNCS®-NB

QUICK JAW CHANGE
wide master jaws

Main dimensions and technical data

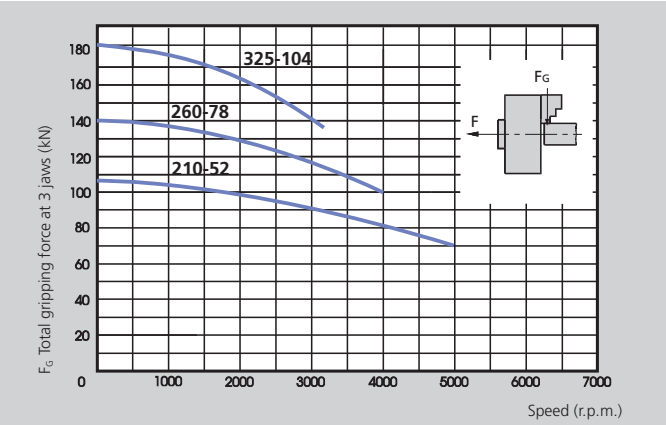


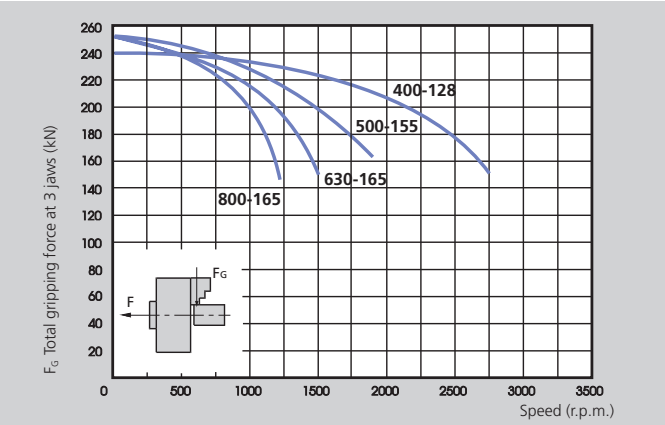
Subject to technical changes
Dimensions and position of base jaws are depending on top jaw type
For more detailed information please ask for customer drawing

SMW-AUTOBLOK Type		KNCS-NB 210-52			KNCS-NB 225-66			KNCS-NB 260-78				KNCS-NB 275-86			KNCS-NB 325-104			
Mounting	**Size**	**Z170**	**A6**	**A8**	**Z170**	**A6**	**A8**	**Z170**	**Z220**	**A6**	**A8**	**Z220**	**A6**	**A8**	**Z220**	**Z300**	**A8**	**A11**
	A	215			225			260				275			324			
	B	105	122	124	105	122	124	120	120	137	139	120	144	139	130	130	149	151
H6	**D**	170	106.39	139.73	170	106.39	139.73	170	220	106.39	139.73	220	106.39	139.73	220	300	139.73	196.88
	E	168			180			210				210			268			
	F	85			95			111				122			144			
Threaded ring/depth	**G1**	M60 x 1.5/16			M75 x 1.5/16			M90 x 2/20				M95 x 2/20			M115 x 2/22			
Piston thread/depth	**G2**	M75 x 2/19			M85 x 2/19			M102 x 2/23				M110 x 2/23			M132 x 2/25			
Piston stroke	**K**	22			22			25				25			25			
max.	**L**	25	42	44	25	42	44	28	28	45	47	28	52	47	28	28	47	49
	M	52			66			78				86			104			
Fixing bolt circle	**N**	133.4	133.4	171.4	133.4	133.4	171.4	133.4	171.4	133.4	171.4	171.4	133.4	171.4	171.4	235	171.4	235
Fixing bolt	**O**	M12	M12	M16	M12	M12	M16	M12	M16	M12	M16	M16	M12	M16	M16	M20	M16	M20
	P	72			82			95				105			130			
	Q	261			271			318				322			376			
Thread/thread depth	**R1**	M10/12			M10/12			M10/12				M10/18			M10/12			
Thread/thread depth	**R2**	M6/10			M6/10			M8/14				M8/14			M10/12			
	S	6			6			6				6			6			
	a	28			28			35				35			50			
Base jaw tooth pitch	**-**	4.7			4.7			5.5				5.5			5.5			
Base jaw offset	**r**	28.3			33			33				38.5			49.5			
Base jaw offset	teeth	6			7			6				7			9			
	α°	60			60			60				60			60			
	β°	60			60			60				60			60			
Stroke per jaw at piston stroke **K** max.	mm	6.0		22	6.0		22	7.0			25	7.0		25	7.0			25
max. actuating force 3-jaw chuck	kN	53			53			70				70			95			
max. total gripping force 3-jaw chuck	kN	100			100			135				135			180			
max. speed 3-jaw chuck	r.p.m	5000			5000			4000				4000			3300			
Weight without jaws	kg	24	26	26	26	29	29	40	40	43	43	48	53	50.7	65	65	68	68
Moment of inertia	kg·m²	0.11			0.21			0.38				0.41			0.85			
rec. closed center cylinder	Type	**SIN-S 125/150**			**SIN-S 125/150**			**SIN-S 150/175**				**SIN-S 150/175**			**SIN-S 150/175/200**			
rec. open center cylinder	Type	**VNK 130-52**			**VNK 150-67**			**VNK 170-77**				**VNK 225-95**			**VNK 250-110**			

* Indirect mounting by reducing flange

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		KNCS-NB 340-117			KNCS-NB 400-128				KNCS-NB 500-155				KNCS-NB 630-165			KNCS-NB 800-165		
Mounting	**Size**	**Z300**	**A8**	**A11**	**Z300**	**Z380**	**A11**	**A15**	**Z300**	**Z380**	**A11**	**A15**	**Z380**	**A11***	**A15**	**Z520**	**A15***	**A20**
	A		340			400				500				630			800	
	B	130	160	151	140	140	161	163	174	174	195	197	174	214	197	174	214	199
H6	**D**	300	139.73	196.88	300	380	196.88	285.77	300	380	196.88	285.77	380	196.88	285.77	520	285.77	412.8
	E		270			330				420				420/585			420/585/750	
	F		160			180				207				217			217	
Threaded ring/depth	**G1**		M125 x 2/22			M138 x 2/22				M165 x 2/25				M175 x 2/25			M175 x 2/25	
Piston thread/depth	**G2**		M146 x 2/25			M160 x 2/25				M185 x 2/28				M195 x 2/28			M195 x /2/28	
Piston stroke	**K**		25			32				42				42			42	
max.	**L**	28	58	49	32	32	53	55	42	42	63	65	42	82	65	42	82	67
	M		117			128				155				165			165	
Fixing bolt circle	**N**	235	171.4	235	235	330.2	235	330.2	235	330.2	235	330.2	330.2	235*	330.2	463.6	330.2*	463.6
Fixing bolt	**O**	M20	M16	M20	M20	M24	M20	M24	M20	M24	M20	M24	M24	M20*	M24	M24	M24*	M24
	P		140			152				180				195			195	
	Q		380			455				554				650			817	
Thread/thread depth	**R1**		M10/16			M12/18				M16/25				M16/25			M16/25	
Thread/thread depth	**R2**		M10/16			M12/18				M12/18				M12/18			M12/18	
	S		6			8				8				8			8	
	a		50			50				62				75			75	
Base jaw tooth pitch	mm		5.5			5.5				7				7			7	
Base jaw offset	**r**		49.5			60.5				77				91			91	
Base jaw offset	teeth		9			11				11				13			13	
	α°		60/35			60				60				20/9 x 40			20/9 x 40	
	β°		60			60				60				60			60	
Stroke per jaw at piston stroke **K** max.	mm	7.0		25	8.0			32	10.0			42	10.0		42	10.0		42
max. actuating force 3-jaw chuck	kN		95			115				120				120			120	
max. total gripping force 3-jaw chuck	kN		180			240				250				250			250	
max. speed 3-jaw chuck	r.p.m		3300			2750				1800				1500			1200	
Weight without jaws	kg	77	88.5	82.5	111	111	116	116	225	225	231	231	390	411	398	620	660	635
Moment of inertia	kg·m²		1.24			2.5				6.5				18			27	
rec. closed center cylinder	Type	**SIN-S 150/175/200**			**SIN-S 175/200**				**SIN-S 175/200**				**SIN-S 175/200**			**SIN-S 175/200**		
rec. open center cylinder	Type	**VNK 320-127**			**VNK 320-127**				**VSG 450-165**				**VSG 450-165**			**VSG 450-165**		

* Indirect mounting by reducing flange

For further jaws and accessories please ask for our 150 pages special catalogue!

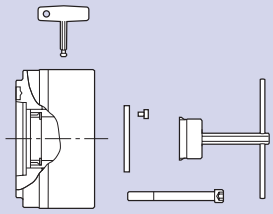
Page 304 | Page 217 | Page 96 | Page 306

KNCS®-NB

QUICK JAW CHANGE

Ordering review

For further jaws and accessories please ask for our 150 pages special catalogue!

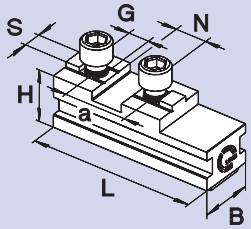


Size / Spindle mounting	KNCS-NB 210-52	KNCS-NB 225-66	KNCS-NB 260-78	KNCS-NB 275-86	KNCS-NB 325-104	KNCS-NB 340-117	KNCS-NB 400-128	KNCS-NB 500-155	KNCS-NB 630-165	KNCS-NB 800-165
Centering rim small			Z170 064645		Z220 064695		Z300 064303	Z300 064306		
Centering rim large	Z170 064334	Z170 069790	Z220 064646	Z220 069660	Z300 064715	Z300 069665	Z380 063950	Z380 064307	Z380 064548	Z520 064579
A 05										
A 06	064610	069791	064669	069661						
A 08	064611	069792	064670	069662	064716	069666				
A 11					064723	069667	064304	064308	064577	
A 15							064305	064309	064549	064615
A 20										064616

Supply range:

Chuck + disengaging key + mounting bolts + mounting key + set of coverplates
without base jaws, without top jaws

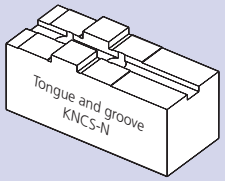
Base jaw type



GBK-B

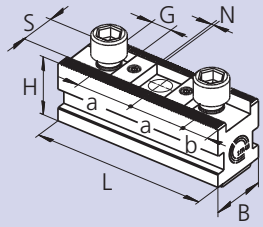
KNCS-N standard tongue & groove

Existing top jaw



KNCS-NB	210-52/225-66	260-78/275-86	325-104/340-117	400-128	500-155	630-165	800-165
Id. No.	138494	039624	039626	039629	035565	035902	064604
B	28	35	50	50	62	75	75
H	32	40	45.8	45.8	57	57	57
L	85	104	115	125	160	200	287
N	20	20	20	26	30	30	30
S	10	12	12	12	18	18	18
G (metric)	M8	M12	M12	M12	M16	M16	M16
a	40	40	40	54	60	60	60

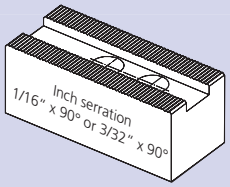
Base jaw type



GBK-BD

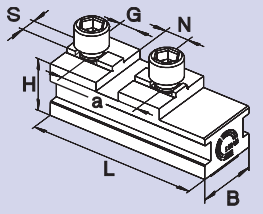
Inch serrated (for SMW-AUTOBLOK standard jaws)

Existing top jaw



KNCS-NB	210-52/225-66	260-78/275-86	325-104/340-117	400-128	500-155	630-165	800-165
Id. No.	036292	035704	036167	036293	036294	036295	036296
B	28	35	50	50	62	75	75
H	32	40	45.8	45.8	61	61	61
L	85	104	115	125	160	200	287
N	1/16" x 90°	1/16" x 90°	1/16" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
S (ridge)	17	21	21	25.5	25.5	25.5	25.5
G	M12	M16	M16	M20	M20	M20	M20
a	2 x 23	30/28	30/28	2 x 38	38/49/38	38/38/52/38	3x38/60,7/2x38
b	11	14	14	17	17	18	17,5

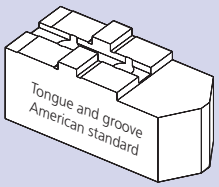
Base jaw type



GBK-BA

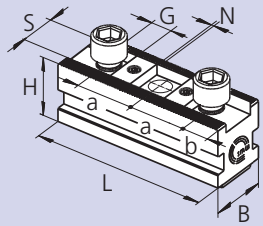
American standard tongue & groove

Existing top jaw



KNCS-NB	210-52/225-66	260-78/275-86	325-104/340-117	400-128	500-155	630-165	800-165
Id. No.	-	-	039628	039631	060561	060562	064590
B	-	-	50	50	62	75	75
H	-	-	45.8	45.8	57	57	57
L	-	-	120	146	168	203	287
N	-	-	19.02	19.02	19.02	19.02	19.02
S	-	-	12.7	12.7	12.7	12.7	12.7
G (inch)	-	-	5/8-11	3/4-10	3/4-10	3/4-10	3/4-10
a	-	-	63.5	76.2	76.2	76.2	76.2

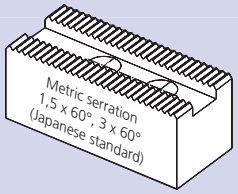
Base jaw type



GBK-BM

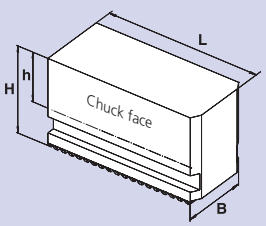
Metric serration

Existing top jaw



KNCS-NB	210-52/225-66	260-78/275-86	325-104/340-117	400-128	500-155	630-165	800-165
Id. No.	035566	035567	035568	035569	035570	035917	036708
B	28	35	50	50	62	75	75
H	32	40	45.8	45.8	61	61	61
L	85	104	115	125	160	200	287
N	1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°	3 x 60°	3 x 60°	3 x 60°
S	14	16	21	22	25	25	25
G (metric)	M12	M12	M16	M20	M20	M20	M20
a	2 x 25	2 x 30	2 x 30	2 x 43	50/ 60	60/60/70,5/60	4 x 60
b	11	11	14	17	17	17	17,5

Jaw type



UVB-B

Soft wide monoblock jaws

KNCS-NB	260/275	325/340	400	500
Jaw type	UVB-B 250	UVB-B 315	UVB-B 400	UVB-B 500
Id. No.	238910	238911	238740	238912
B	35	50	50	62
H	110	115	125	160
h	81	81	91	113
L	109.5	120	148	175
kg/set	5.9	11.9	17.6	32

Actuating cylinders with and without through-hole

VNK
Hydraulic open center cylinder with built-in safety valves, piston stroke control and coolant collector ($p_{max.}$ = 45 bar)

SIN-S
Hydraulic closed center cylinder with built-in safety valves and piston stroke control. Central through-hole for air or coolant ($p_{max.}$ = 70 bar)

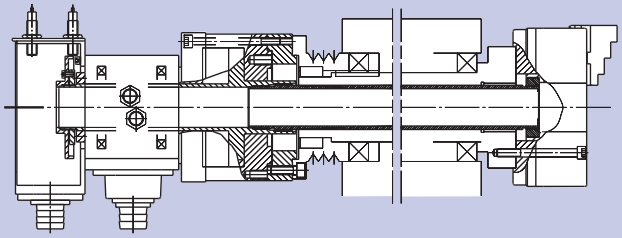
SIN-HL
Hydraulic closed center cylinder for high-low clamping with built-in safety valves and piston stroke control. Central through-hole for air, oil or coolant ($p_{max.}$ = 70 bar)

Type	VNK 130/52	VNK 170/77	VNK 225/95	VNK 320/127	VSG 450/165	SIN-S 125	SIN-S 150	SIN-S 175	SIN-S 200	SIN-HL 100	SIN-HL 125	SIN-HL 150	SIN-HL 175
Draw pull P_{max} kN	58	76	100	123	138	71	108	150	196	49	77	108	154
$n_{max.}$ r.p.m.	6300	5000	4000	3200	2000	6000	6000	5000	4000	7000	6000	6000	5000
Through-hole mm	52.5	77	95.5	127.5	165	—	—	—	—	—	—	—	—

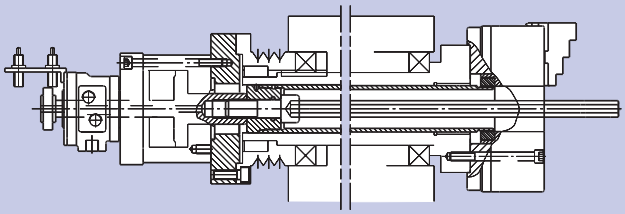
For more information see page 217

Examples for assembly

Open center with VNK

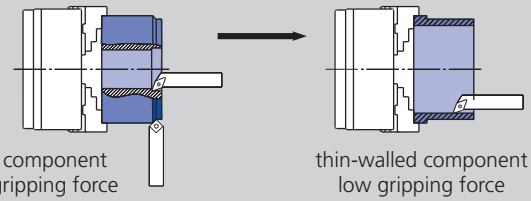


Partial open center with SIN-S/SIN-HL



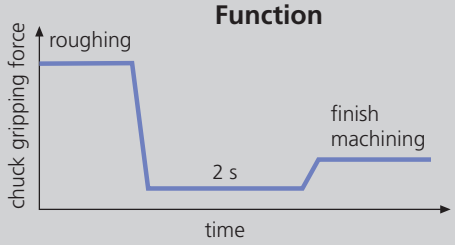
High-low clamping for thin-walled components

Principle



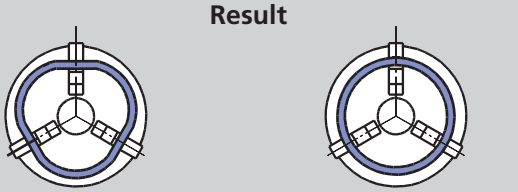
For easily deformed components SMW-AUTOBLOK offers "high-low" clamping. The gripping force of the chuck can be reduced from a large amount of gripping force used in roughing, to a smaller amount of gripping force for a finishing cut without unclamping the component. The SMW-AUTOBLOK closed center cylinder type SIN-HL and a modification of the machine hydraulic are necessary.

Function



In combination with a SMW-Autoblok "high-low" hydraulic cylinder SIN-HL and suitable machine hydraulics, the KNCS-NB/KNCS-NBX wedge bar system allows a monitored reduction of gripping force.
The component remains clamped in the chuck, however, the stress of the component can be released. The "high-low" cycle is programmable and is finished completely within 2 - 4 sec.

Result



The result are round components with a minimum of deformation.

For additional information please ask our engineers.