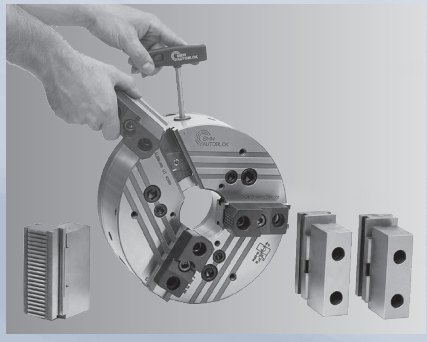
Fast changeover, fast payback:

The original quick jaw change power chuck

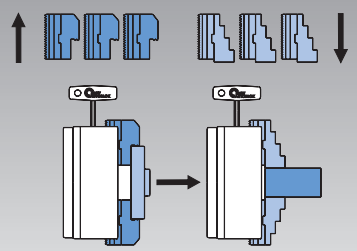


KNCS®-NB LARGE THROUGH-HOLE

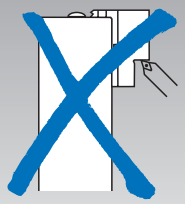
KNCS®-NBX EXTRA LARGE THROUGH-HOLE

► **ALL EXISTING TOP JAWS CAN BE USED**

Minimal set-up times
Jaw change in less than 1 minute



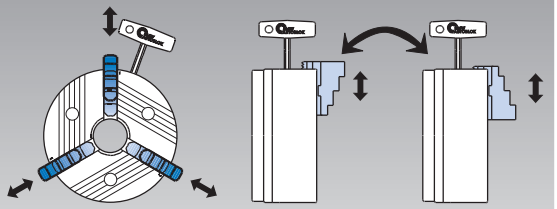
High repeatability when changing jaws
No reboring of already machined jaws necessary, because runout < 0.02 mm (KNCS-NB 210)



Extra long, symmetrical and wide jaw guides.
Ideal for O.D. or I.D. gripping

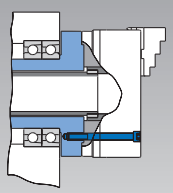
Unique **wedge bar drive for high speed**.
Minimum loss of gripping force because of tangentially supported wedge bars.
Minimum increase of gripping force **(hysteresis)** after quick spindle stop.
High efficiency of the wedge bar drive ensures highest concentricity and **repeatability**.
Suitable for **high-low clamping**

Flexibility jaws can be radially adjusted and are reversible = **less jaw sets**



Jaws radially adjustable Jaws 180° reversed

Direct mounting



Recess and bolt circle to DIN 55026

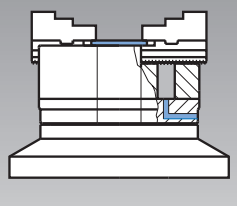
Original SMW-AUTOBLOK quick **jaw change**.
Jaw change accuracy with patented **jaw safety interlock**

Profitability
Example set-up times / costs

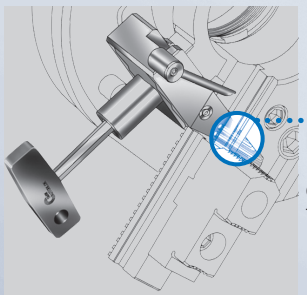
	Conventional chuck	KNCS®-NB
Jaw change	10 Min.	1 Min.
Reboring of jaws	20 Min.	0 Min.
Ø jaw changes / day	2	2
Working days / year	230	230
Machine costs / hour	$ 60.–	$ 60.–
Total costs / year	$ 13 800.–	$ 460.–
Profit*		**$ 13 340.–**

* If jaws are changed more often, the profitability is increased accordingly.

Vertical application



Version for vertical application with cover and drain holes for coolant available

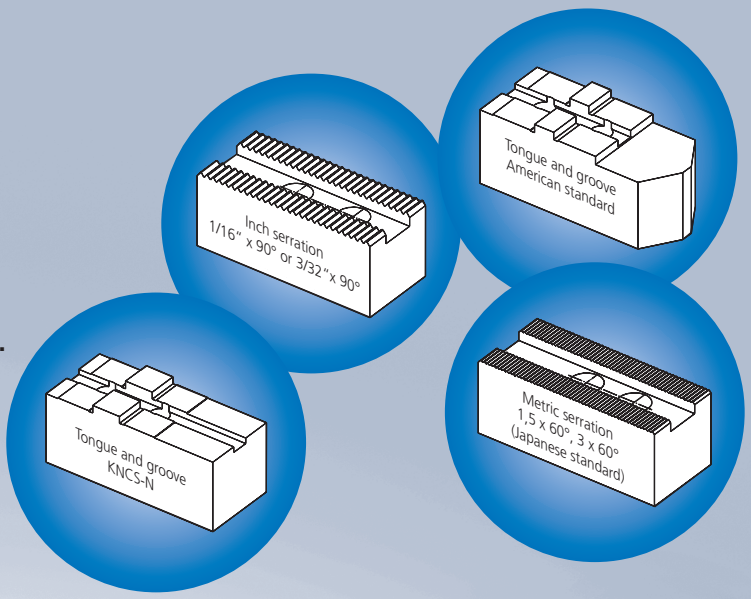


If the serration is not fully engaged – the jaw safety interlock is active

Less costs by using all existing top jaws from:

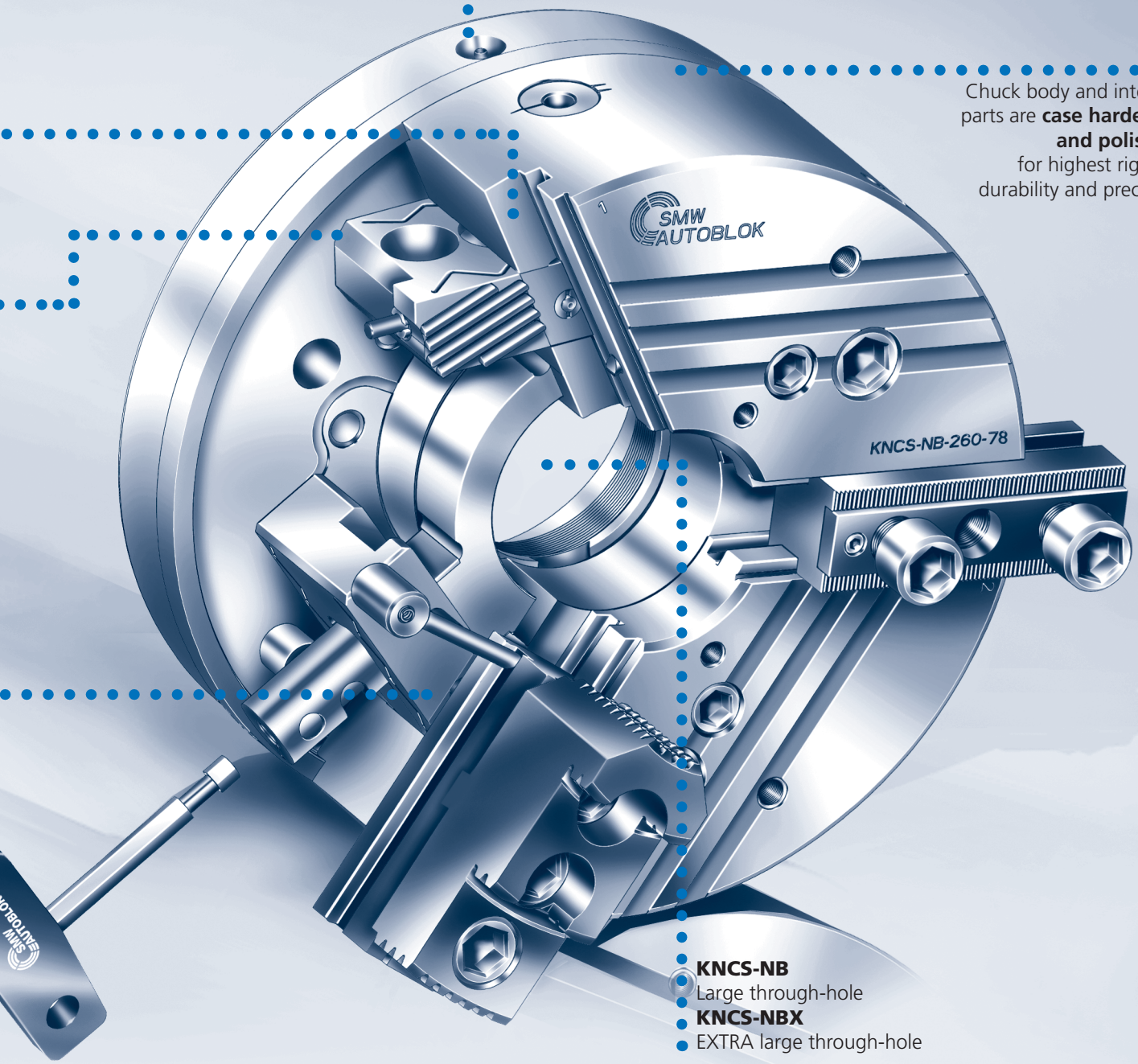
- SMW-AUTOBLOK
- Autoblok
- Buck
- Forkardt
- Gamet
- Howa
- Kitagawa
- Logansport
- Mario Pinto
- Matsumoto
- Pratt Burnerd
- Röhm
- Rotomors
- Schunk
- Berg
- Woodworth

If your jaw type is not included, please contact us.



Easy lubrication even on vertical machines with 3 radial built-in grease fittings

Chuck body and internal parts are **case hardened and polished** for highest rigidity, durability and precision

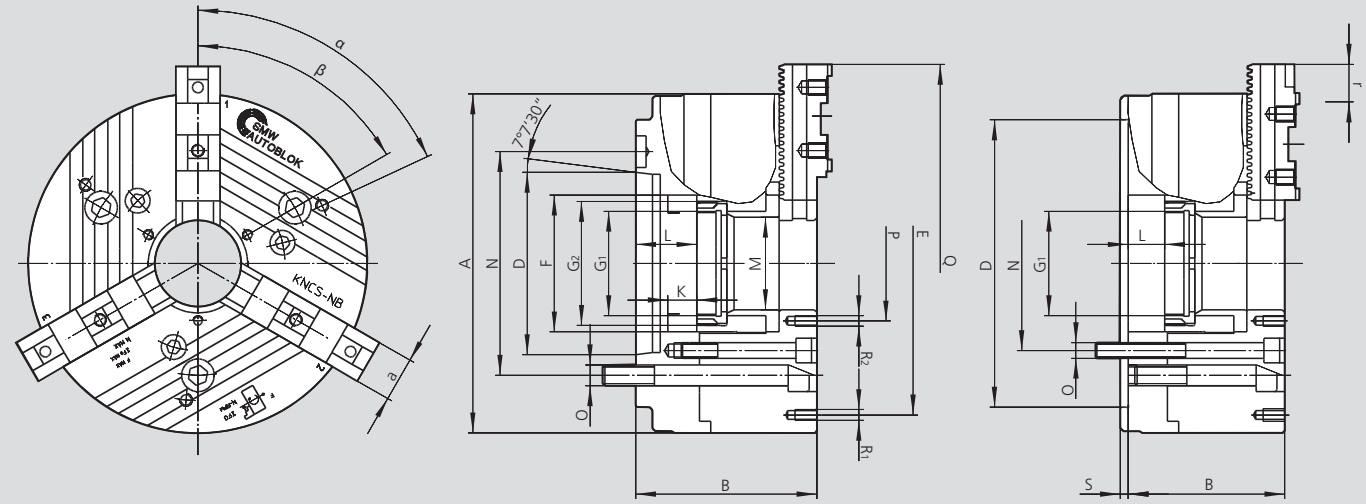


KNCS-NB
Large through-hole
KNCS-NBX
EXTRA large through-hole

KNCS®-NB

QUICK JAW CHANGE
Wide master jaws

■ Main dimensions and technical data

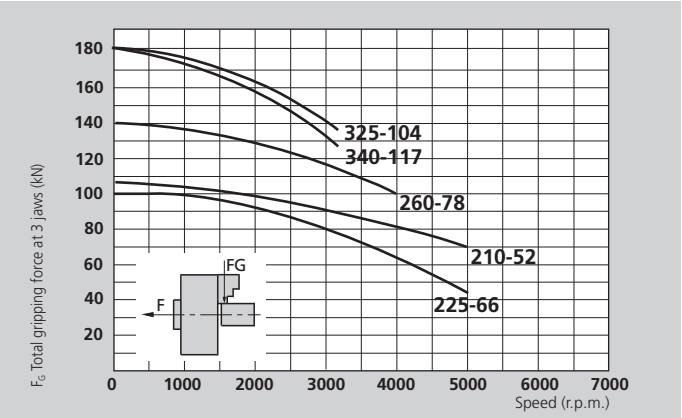


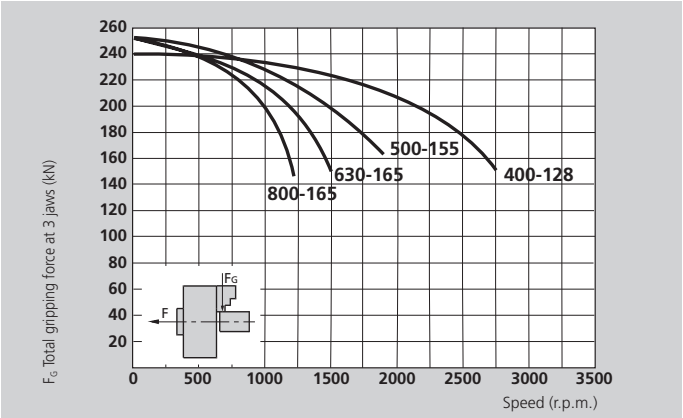
Subject to technical changes.
Dimensions and position of base jaws are depending on top jaw type.
For more detailed information please ask our customer service

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
	D H6	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			
Number of teeth	teeth	6			7			6				7			9			
α	deg.	60			60			60				60			60			
β	deg.	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-T2 130-52**			**VNK-T2 150-67**			**VNK-T2 170-77**				**VNK-T2 225-95**			**VNK-T2 250-110**			

* Indirect mounting by reducing flange.

Actual gripping force diagrams





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.

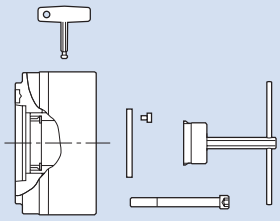
SMW-AUTOBLOK Type		KNCS-NB 340-117			KNCS-NB 400-128				KNCS-NB 500-155				KNCS-NB 630-165			KNCS-NB 800-165		
Mounting	**Size**	**Z300**	**A8***	**A11**	**Z300**	**Z380**	**A11**	**A15**	**Z300**	**Z380**	**A11**	**A15**	**Z380**	**A11***	**A15**	**Z520**	**A15***	**A20**
	A	340			400				500				630			800		
	B	130	160	151	140	140	161	163	174	174	195	197	174	214	197	174	214	199
	D H6	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	**-**	5.5			5.5				7				7			7		
Base jaw offset	**r**	49.5			60.5				77				91			91		
Number of teeth	teeth	9			11				11				13			13		
α	deg.	60 / 35			60 / 35				20 / 9 x 40				20 / 9 x 40			20 / 9 x 40		
β	deg.	60 / 35			60 / 35				20 / 9 x 40				20 / 9 x 40			20 / 9 x 40		
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-T2 320-127**			**VNK-T2 320-127**				**VSG 450-165**				**VSG 450-165**			**VSG 450-165**		

* Indirect mounting by reducing flange.

KNCS®-NB

QUICK JAW CHANGE
Wide master jaws

■ Ordering review

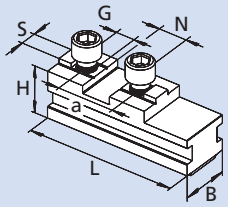


Spindle mounting \ Size	KNCS-NB 210-52	KNCS-NB 225-66	KNCS-NB 260-78	KNCS-NB 275-86	KNCS-NB 325-104	KNCS-NB 340-117	KNCS-NB 400-128	KNCS-NB 500-155	KNCS-NB 630-165	KNCS-NB 800-165
Centering rim small			Z170 064645		Z220 064695		Z300 064303	Z300 064306		
Centering rim large	Z170 064334	Z170 069790	Z220 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 + 1 set of coverplates
without base jaws, without top jaws

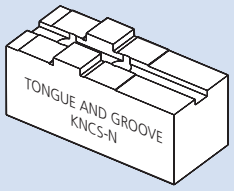
Base jaw type



GBK-B

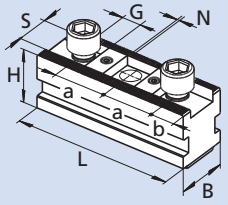
TONGUE & GROOVE KNCS-N standard

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 (2x)
S	10	12	12	12	18	18	18
G (metric)	M8	M12	M12	M12	M16	M16	M16
a	40	40	40	54	60	60	2 x 60

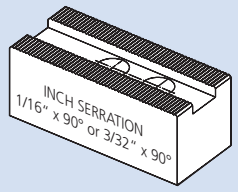
Base jaw type



GBK-BD

INCH SERRATED (for SMW-AUTOBLOK standard jaws)

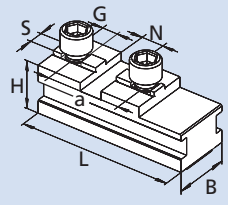
Existing top jaw



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

* 30 / 30 on request.

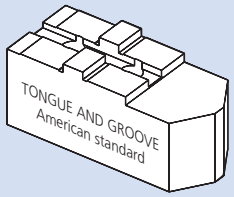
Base jaw type



GBK-BA

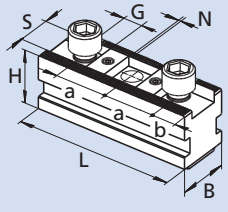
TONGUE & GROOVE American standard

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 (2x)
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	2 x 76.2

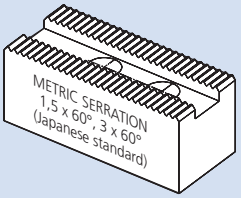
Base jaw type



GBK-BM

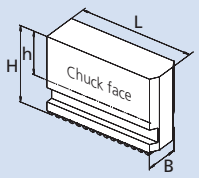
METRIC SERRATION

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



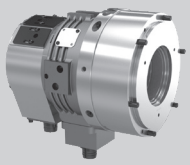
UVB-B

Soft wide monoblock jaws

KNCS-NB	210/225	260/275	325/340	400	500	630/800
Jaw type	UVB-B 210	UVB-B 250	UVB-B 315	UVB-B 400	UVB-B 500	UVB-B 630
Id. No.	534337	238910	238911	238740	238912	5301060
B	28	35	50	50	62	75
H	80	110	115	125	160	160
h	55	81	60	60	105	105
L	85	109.5	120.5	148	175	230
kg / set	4.2	9.4	18.5	20.7	38.8	61.5

Actuating cylinders with and without through-hole

VNK-T2

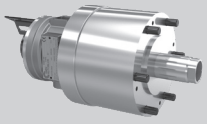


Hydraulic open center cylinder with built-in safety valves, piston stroke control and coolant collector (pmax. = 45 bar)

SIN-S

Hydraulic closed center cylinder with built-in safety valves and piston stroke control. Central through-hole for air or coolant (pmax. = 70 bar)

SIN-HL



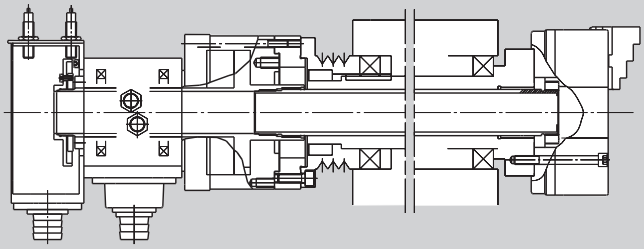
Hydraulic closed center cylinder for high-low clamping with built-in safety valves and piston stroke control. Central through-hole for air, oil or coolant (pmax. = 70 bar)

SMW-AUTOBLOK Type		VNK-T2 130/52	VNK-T2 170/77	VNK-T2 225/95	VNK-T2 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 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	-	-	-	-	-	-	-	-

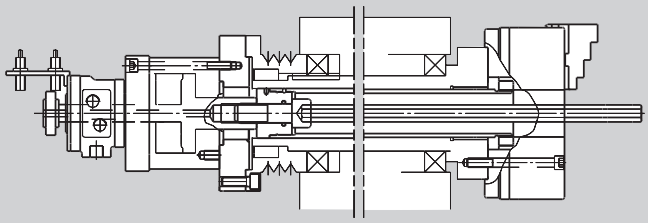
For more technical information see general catalog page 327.

Examples for assembly

Open center with VNK-T2

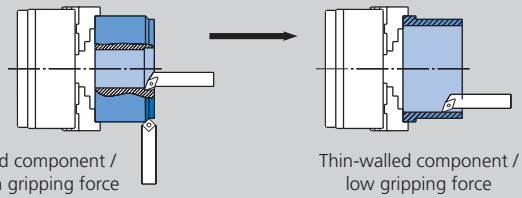


Partial open center with SIN-S / SIN-HL



High-low clamping for thin-walled components

Principle



Solid component / high gripping force

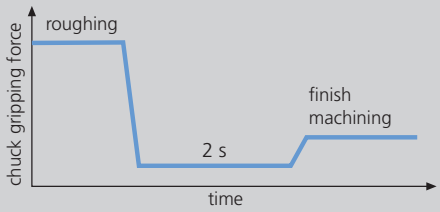
Thin-walled component / low gripping force

For easily deformable 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

Without "high-low" clamping

With "high-low" clamping

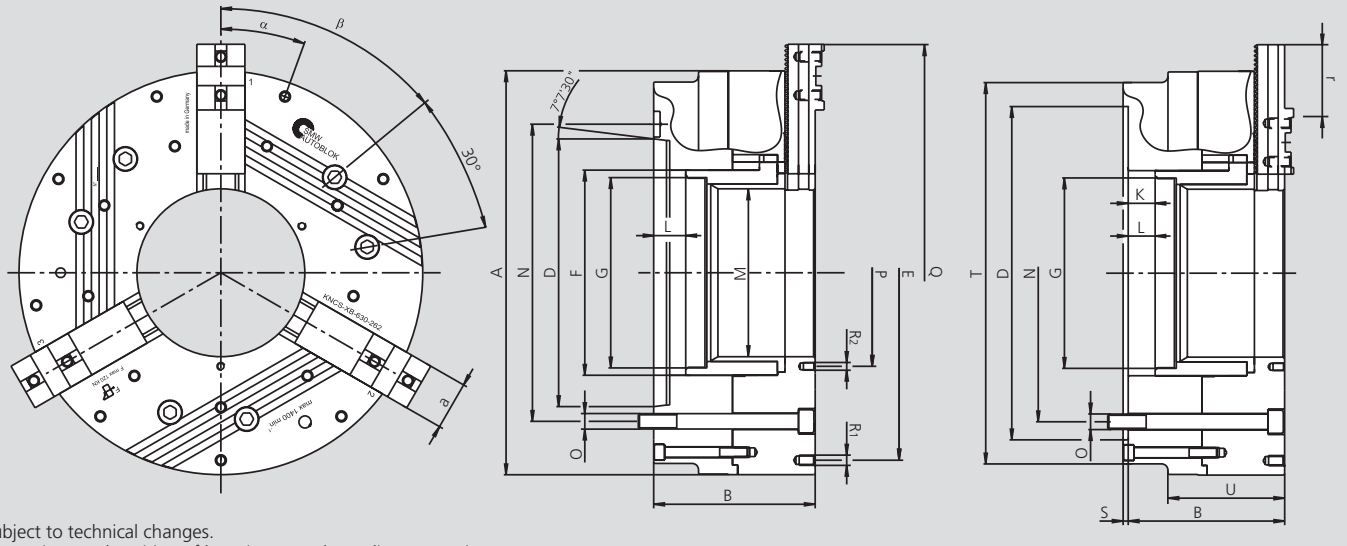
The result are round components with a minimum of deformation.

For additional information please ask our engineers.

KNCS®-NBX

QUICK JAW CHANGE
Wide master jaws

- **Main dimensions and technical data**
- **EXTRA large through-hole**



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

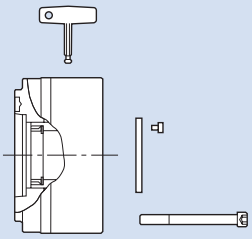
SMW-AUTOBLOK Type		KNCS-NBX 425-170			KNCS-NBX 530-210			KNCS-NBX 630-262			KNCS-NBX 800-262			KNCS-NBX 1000-262		
Mounting	**Size**	**Z380**	**A11**	**A15**	**Z380**	**A11**	**A15**	**Z520**	**A15**	**A20**	**Z520**	**A15**	**A20**	**Z520**	**A15***	**A20**
	A		425			530			630			800			1000	
	B	197	237	220	244	284	267	244	284*	269	244	284*	269	244	284*	269
	D H6	380	196.88	285.77	380	196.88	285.77	520	285.77	412.77	520	285.77	412.77	520	285.77	412.77
	E		330.2			420			420 / 585			420 / 585 / 750			420 / 585 / 750 / 915	
	F		222			262			320			320			320	
Piston thread / depth	**G**		M202 x 2 / 25			M240 x 2 / 28			M297 x 2 / 33			M297 x 2 / 33			M297 x 2 / 33	
Piston stroke	**K**		32			42			42			42			42	
Max.	**L**	32	72	55	42	82	55	42	82	67	42	82	67	42	82	67
	M		170			210			262			262			262	
Fixing bolt circle	**N**	330.2	235.0	330.2	330.2	235.0	30.2	463.6	330.2*	463.6	463.6	330.2*	463.6	463.6	330.2*	463.6
Fixing bolt	**O**	M24	M20	M24	M24	M20	M24	M24	M24*	M24	M24	M24*	M24	M24	M24*	M24
	P		195			235			292			292			292	
	Q		487			598			745			915			1107	
Thread / thread depth	**R1**		M12 /16			M16 / 25			M16 / 25			M16 / 25			M16 / 25	
Thread / thread depth	**R2**		M12 / 16			M16 / 25			M12 / 18			M12 / 18			M12 / 18	
	S		8			8			8			8			8	
	T		412			490			595			600			600	
	U		137			167			182			182			182	
	a		50			62			75			75			75	
Base jaw tooth pitch	**-**		5.5			7			7			7			7	
Base jaw offset	**r**		49.5			70			119			133			133	
Number of jaws	teeth		9			10			17			19			19	
α	deg.		15° / 12 x 30°			20° / 9 x 40°			20° / 9 x 40°			20° / 9 x 40°			20° / 9 x 40°	
β	deg.		60			60			60			60			60	
Stroke per jaw at piston stroke **K** max.	mm	8		32	10		42	10		42	10		42	10		42
Max. actuating force 3-jaw chuck	kN		115			120			120			120			120	
Max. total gripping force 3-jaw chuck	kN		240			250			250			250			250	
Max. speed 3-jaw chuck	r.p.m.		2500			1500			1400			1000			850	
Weight without jaws	kg		164			320			395			635			985	
Moment of inertia	kg·m²		4.3			13			23			54			125	
Rec. closed center cylinder	Type	**SIN-S 175 / 200**			**SIN-S 175 / 200**			**SIN-S 175 / 200**			**SIN-S 175 / 200**			**SIN-S 175 / 200**		
Rec. open center cylinder	Type	**VSG 450-165**			**VSG 550-205**			**VSG 550-205**			**VSG 550-205**			**VSG 550-205**		

* Indirect mounting by reducing flange.

KNCS®-NBX

QUICK JAW CHANGE
Wide master jaws

■ Ordering review

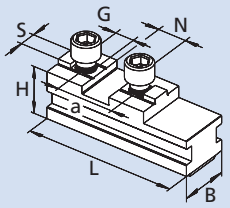


Spindle mounting \ Size	KNCS-NBX 425-170	KNCS-NBX 530-210	KNCS-NBX 630-262	KNCS-NBX 800-262	KNCS-NBX 1000-262
Centering rim	Z380	Z380	Z520	Z520	Z520
large	160080	160090	069760	069770	069780
A 11	160081	160091			
A 15	160082	160092	069768	069778	069788
A 20			069769	069779	069789

Supply range

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

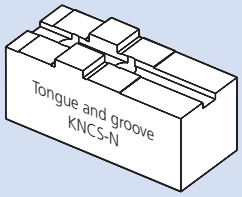
Base jaw type



GBK-B

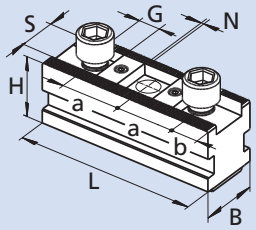
TONGUE & GROOVE KNCS-N standard

Existing top jaw



KNCS-NBX	425-170	530-210	630-262	800-262	1000-262
Id. No.	039629	035565	035902	064604	069806
B	50	62	75	75	75
H	45.8	57	57	57	57
L	125	160	200	286	384
N	26	30	30	30 (2x)	30 (3x)
S	12	18	18	18	18
G (metric)	M12	M16	M16	M16	M16
a	54	60	60	2 x 60	60

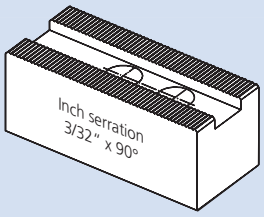
Base jaw type



GBK-BD

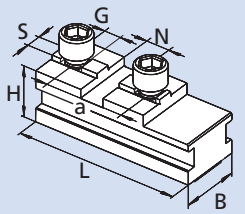
INCH SERRATED (for SMW-AUTOBLOK standard jaws)

Existing top jaw



KNCS-NBX	425-170	530-210	630-262	800-262	1000-262
Id. No.	036293	036294	036295	036296	-
B	50	62	75	75	-
H	45.8	61	61	61	-
L	125	160	200	287	-
N	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	-
S (ridge)	25.5	25.5	25.5	25.5	-
G	M20	M20	M20	M20	-
a	2 x 38	38 / 49 / 38	38 / 38 / 52 / 38	3 x 38/60.7/2 x 38	-
b	17	17	18	17.5	-

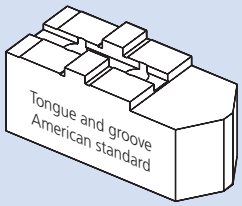
Base jaw type



GBK-BA

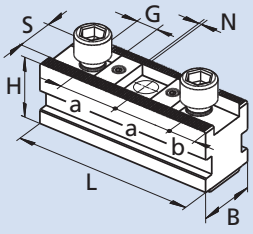
TONGUE & GROOVE American standard

Existing top jaw



KNCS-NBX	425-170	530-210	630-262	800-262	1000-262
Id. No.	039631	060561	060562	064590	069807
B	50	62	75	75	75
H	45.8	57	57	57	57
L	146	168	203	286	384
N	19.02	19.02	19.02	19.02 / (2x)	19.02 / (3x)
S	12.7	12.7	12.7	12.7	12.7
G (inch)	3/4-10	3/4-10	3/4-10	3/4-10	3/4-10 / (4x)
a	76.2	76.2	76.2	2 x 76.2	76.2 / (3x)

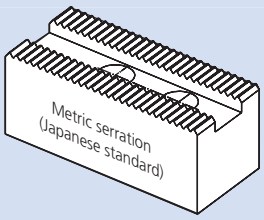
Base jaw type



GBK-BM

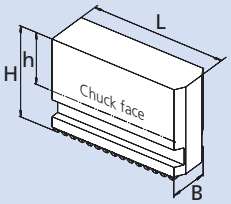
METRIC SERRATION

Existing top jaw



KNCS-NBX	425-170	530-210	630-262	800-262	1000-262
Id. No.	035569	035570	035917	036708	-
B	50	62	75	75	-
H	45.8	61	61	61	-
L	125	160	200	287	-
N	1.5 x 60°	3 x 60°	3 x 60°	3 x 60°	-
S	22	25	25	25	-
G (metric)	M20	M20	M20	M20	-
a	2 x 43	50 / 60	60/60/70.5/60	4 x 60	-
b	17	17	17	17.5	-

Jaw type



UVB-B

Soft wide monoblock jaws

KNCS-NBX	425	530	630 / 800 / 1000
Jaw type	UVB-B 400	UVB-B 500	UVB-B 630
Id. No.	238740	238912	5301060
B	50	62	75
H	125	160	160
h	60	105	105
L	148	175	230
kg / set	20.7	38.8	61.5