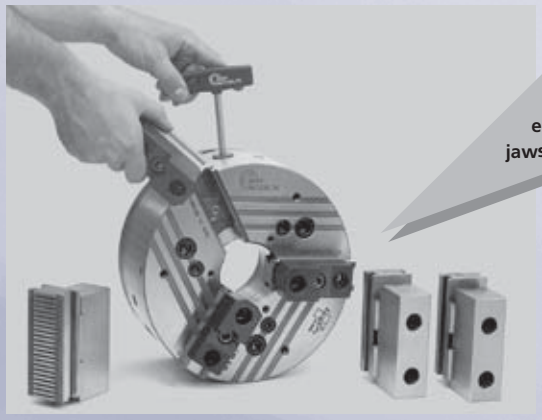
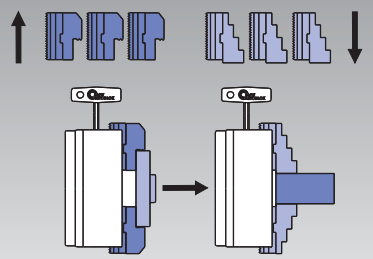
Fast changeover, fast payback:
The quick jaw change chuck KNCS-NB / KNCS-NBX can use all existing top jaws



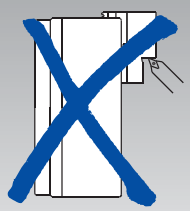
KNCS-NB/KNCS-NBX:
can use
existing
jaws

KNCS®-NB LARGE THROUGH HOLE
KNCS®-NBX EXTRA LARGE THROUGH HOLE

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

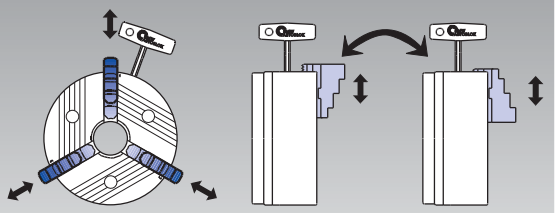


High repeatability when changing jaws
No reboring of already machined jaws necessary, because runout < 0.02 mm (KNCS-NB 210)



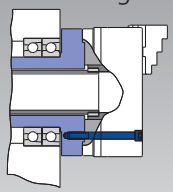
Extra long, symmetrical and wide jaw guides.
Ideal for O.D. or I.D. gripping.

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



Jaws radially adjustable Jaws 180° reversed

Standardized mounting
direct mounting



Recess and bolt circle to DIN **55026**

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 wegde bar drive ensures highest concentricity and **repeatability**. Suitable for **high-low clamping**.

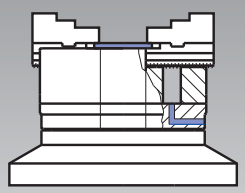
Original SMW-AUTOBLOK patented quick **jaw change**. **Jaw change accuracy** with unique **jaw safety interlock**.

Profitability
Example set-up times/costs

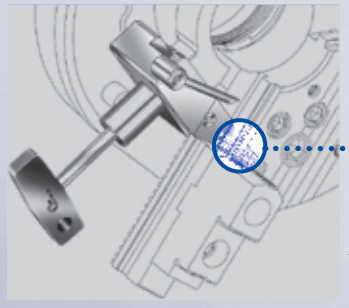
	Conventional chuck	KNCS-NB
Jaw change	10 min	1 min
Reboring of jaws	20 min	0 min
Ø jaw changes/day	2	2
Working days/year	230	230
Machine costs/hour	$ 60.–	$ 60.–
Total costs per year	$ 13800.–	$ 460.–
Profit*		**$ 13340.–**

* 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.

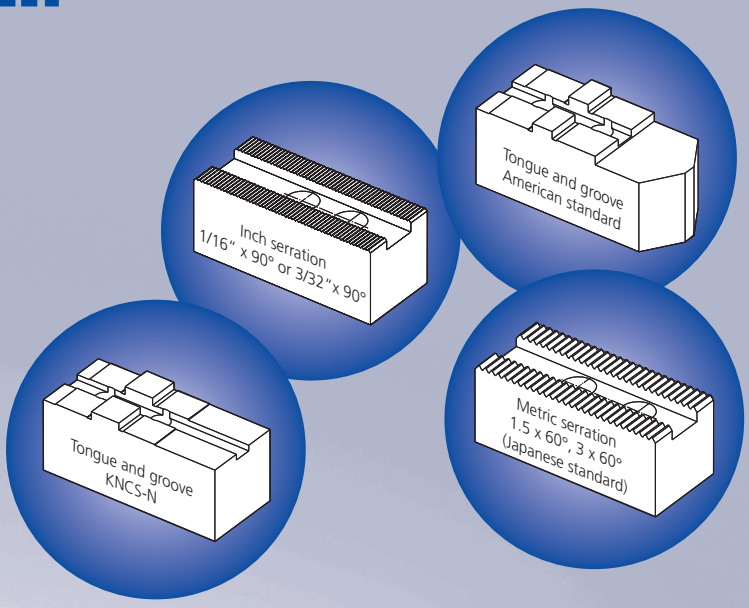


Serration is not fully engaged – jaw safety interlock active.

Less costs by using all existing jaws from:

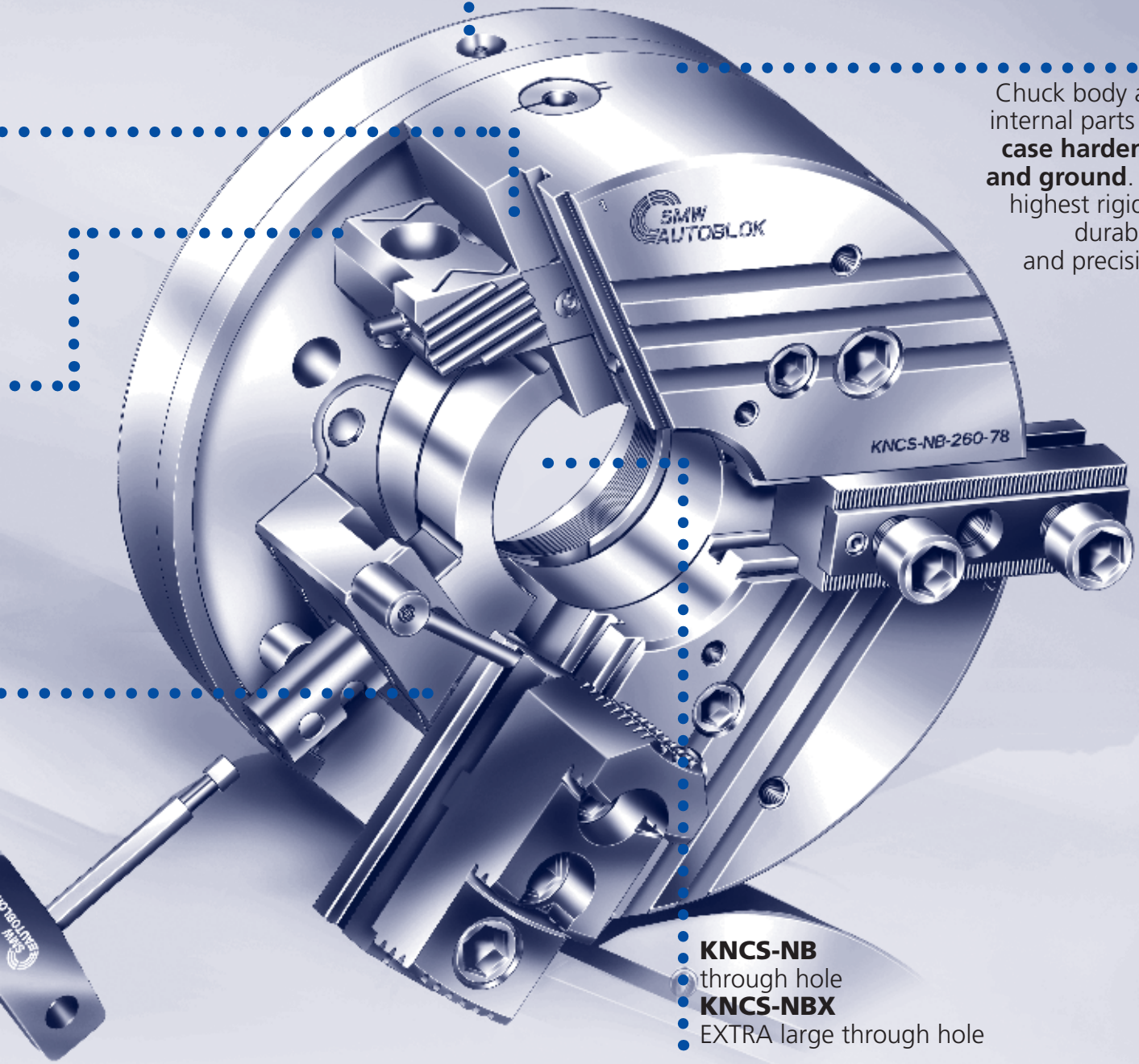
- Autoblok
- Berg
- Buck
- Forkardt
- Gamet
- Howa
- Kitagawa
- Logansport
- Mario Pinto
- Matsumoto
- Pratt Burnerd
- Röhm
- Rotomors
- Schunk
- SMW-Autoblok
- Woodworth

If your jaw type is not here - please ask!



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

Chuck body and internal parts are **case hardened and ground**. For highest rigidity, durability and precision.

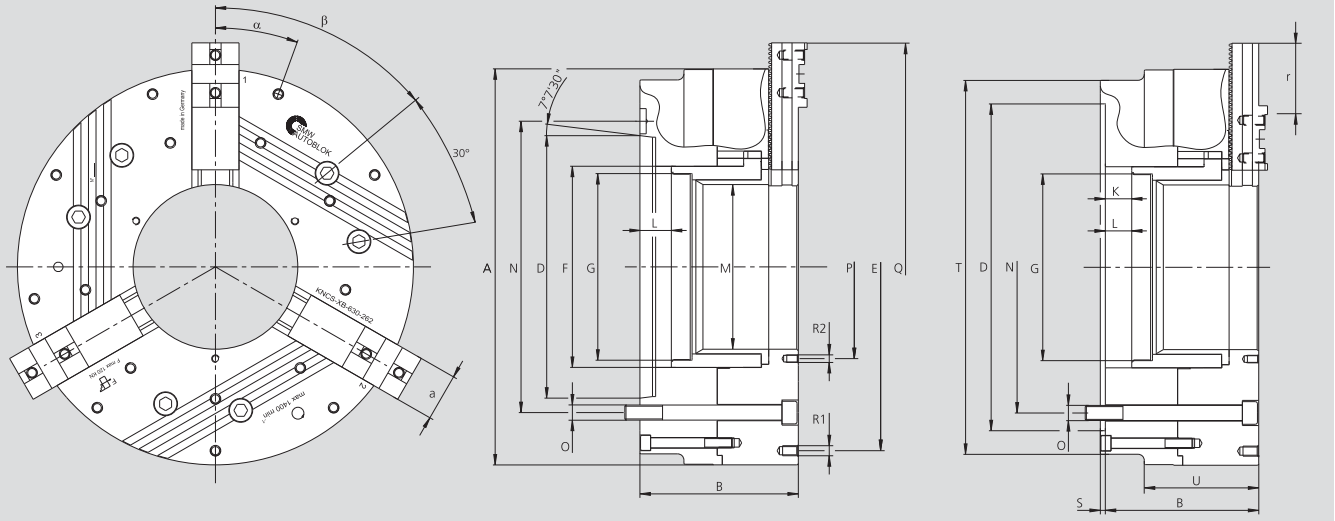


KNCS-NB
through hole
KNCS-NBX
EXTRA large through hole

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 for customer drawing

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
H6	**D**	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		
Base jaw offset	teeth	9			10			17			19			19		
	α°	15°/12x30°			20°/9x40°			20°/9x40°			20°/9x40°			20°/9x40°		
	β°	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**		

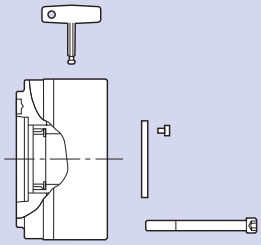
* Indirect mounting by reducing flange

For additional jaw options & accessories please request our 150 page special catalogue!

For additional jaw options & accessories please request our 150 page special catalogue!

KNCS®-NBX

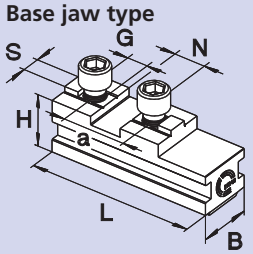
QUICK JAW CHANGE



Size / Spindle mounting	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
center mount	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

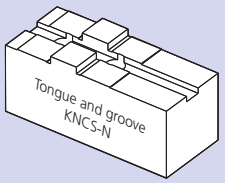


GBK-B

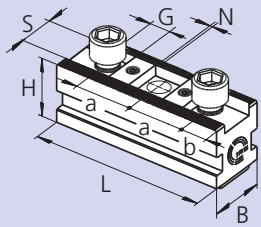
KNCS-N standard tongue & groove

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	30
S	12	18	18	18	18
G (metric)	M12	M16	M16	M16	M16
a	54	60	60	60	60

Existing top jaw



Base jaw type

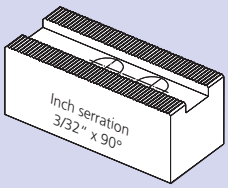


GBK-BD

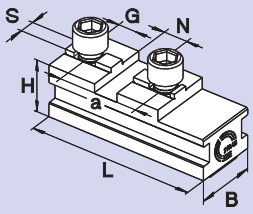
Inch serrated (for SMW-AUTOBLOK standard jaws)

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	

Existing top jaw



Base jaw type

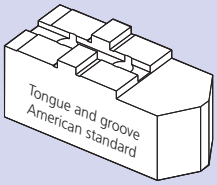


GBK-BA

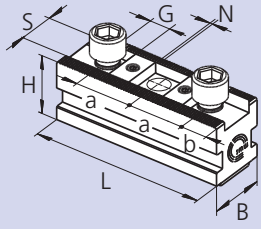
American standard tongue & groove

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	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	76.2	76.2/3x

Existing top jaw



Base jaw type

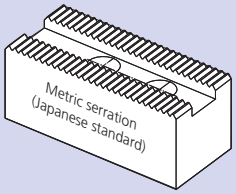


GBK-BM

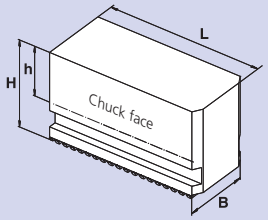
Metric serration

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	

Existing top jaw



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	91	113	105
L	148	175	230
kg/set	17.6	32	61.5

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)

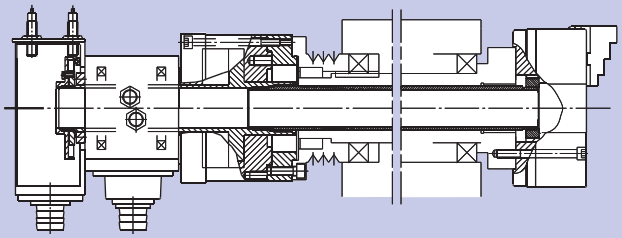
SIN-HL
Hydraulic closed center cylinder for high-low clamping with built-in safety valves and piston stroke control. Central through-hole for air, oil or coolant ($p_{max.}$ = 70 bar)

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 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	—	—	—	—	—	—	—	—

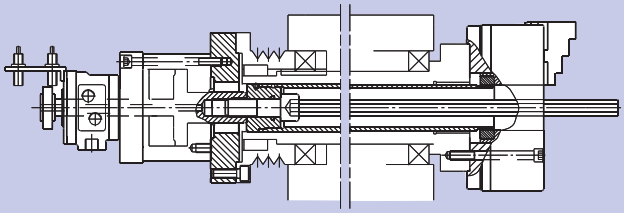
For more information see page 225

Examples for assembly

Open center with VNK

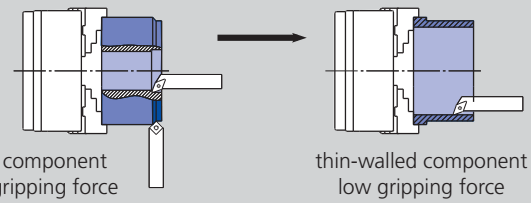


Partial open center with SIN-S/SIN-HL



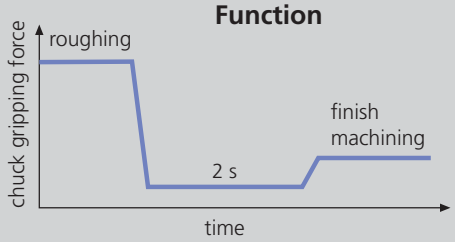
High-low clamping for thin-walled components

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.