

## TSR-C

Self centering - Rigid jaws  
Autocentrante - Griffe rigide

## TSF-C

Self centering - Floating jaws  
Autocentrante - Griffe flottanti

SMW-AUTOBLOK Type		TSF-C 135 TSR-C 135	TSF-C 170 TSR-C 170	TSF-C 210 TSR-C 210	TSF-C 250 TSR-C 250	TSF-C 315 TSR-C 315	TSF-C 400 TSR-C 400	TSF-C 530 TSR-C 530
Angular jaw stroke	deg.	5°	5.2°	5.2°	4.9°	4.9°	4.7°	4.7°
Radial jaw stroke at distance h	mm	3.4	5.3	6.3	7	7	7.5	7.5
Pull down movement (standard)	mm	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Axial piston stroke	mm	16	21	25	25	25	30	30
Max. draw pull	kN	12	18	25	40	40	50	60
Max. gripping force at distance h	kN	29	44	60	96	96	120	150
Max. speed*	r.p.m.	8000	5000	4500	3800	3000	2200	1800
Weight (without top jaws)	kg	4.5	15	27	41	66	115	196
Moment of inertia	kg·m <sup>2</sup>	0.015	0.06	0.16	0.34	0.83	2.3	7
Recommended actuating cylinders		SIN-S 70	SIN-S 85	SIN-S 100	SIN-S 125	SIN-S 125	SIN-S 150	SIN-S 150-175

\*The above maximum speed is allowed with standard weight/height top jaws and applying the full draw pull only. For more informations please contact SMW-AUTOBLOK.

## TSR-RM

Self centering - Rigid jaws  
Autocentrante - Griffe rigide

## TSF-RM

Self centering - Floating jaws  
Autocentrante - Griffe flottanti

SMW-AUTOBLOK Type		TSF-RM 170 TSR-RM 170	TSF-RM 210 TSR-RM 210	TSF-RM 250 TSR-RM 250	TSF-RM 315 TSR-RM 315	TSF-RM 400 TSR-RM 400	TSF-RM 530 TSR-RM 530
Angular jaw stroke	deg.	5.2°	5.2°	4.9°	4.9°	4.7°	4.7°
Radial jaw stroke at distance h	mm	5.3	6.3	7	7	7.5	7.5
Pull down movement (standard)	mm	0.1	0.1	0.1	0.1	0.2	0.2
Axial piston stroke	mm	21	25	25	25	30	30
Max. draw pull	kN	18	25	40	40	50	60
Max. gripping force at distance h	kN	44	60	96	96	120	150
Max. speed*	r.p.m.	5000	4500	3800	3000	2200	1800
Weight (plain back without top jaws)	kg	15	27	41	66	115	196
Moment of inertia	kg·m <sup>2</sup>	0.06	0.16	0.34	0.83	2.3	7
Recommended actuating cylinders		SIN-S 85	SIN-S 100	SIN-S 125	SIN-S 125	SIN-S 150	SIN-S 150-175

\*The above maximum speed is allowed with standard weight/height top jaws and applying the full drawpull only. For more informations please contact SMW-AUTOBLOK.

## TSR-CP

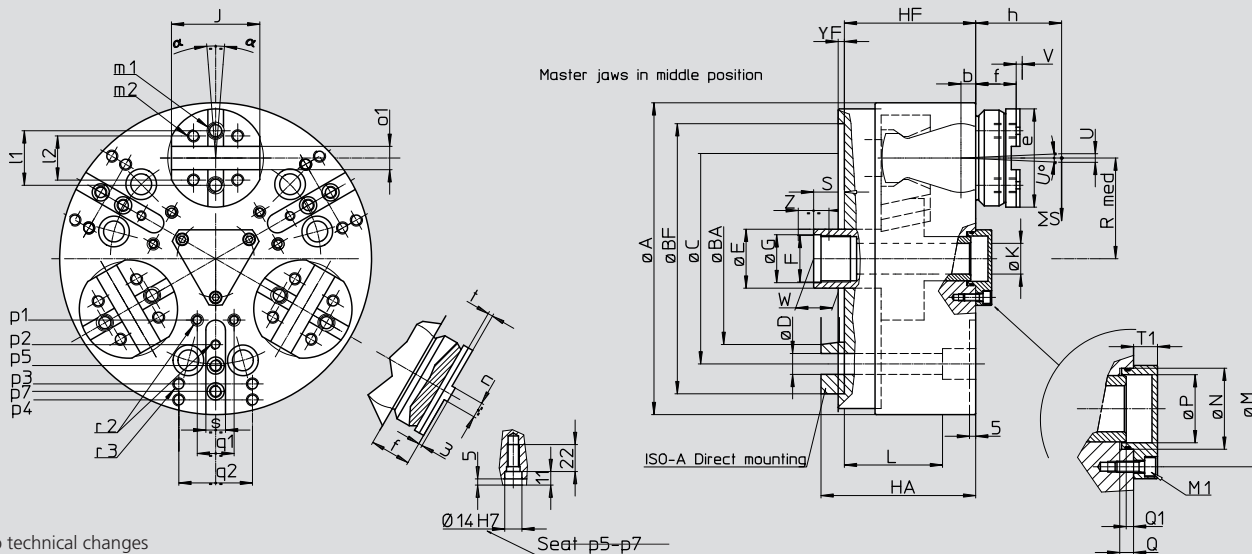
Compensating - Rigid jaws  
Compensante - Griffe rigide

## TSF-CP

Compensating - Floating jaws  
Compensante - Griffe flottanti

SMW-AUTOBLOK Type		TSF-CP 135 TSR-CP 135	TSF-CP 170 TSR-CP 170	TSF-CP 210 TSR-CP 210	TSF-CP 250 TSR-CP 250	TSF-CP 315 TSR-CP 315	TSF-CP 400 TSR-CP 400	TSF-CP 530 TSR-CP 530
Angular jaw stroke	deg.	5°	5.2°	5.2°	4.9°	4.9°	4.7°	4.7°
Radial jaw stroke at distance h	mm	3.4	5.3	6.3	7	7	7.5	7.5
Pull down movement (standard)	mm	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Axial piston stroke	mm	16	21	25	25	25	30	30
Compensation (on the dia.) at dist.h	mm	±0.7	±1	±1.5	±2.5	±2.5	±2.5	±2.5
Max. draw pull	kN	12	18	25	40	40	50	60
Max. gripping force at distance h	kN	29	44	60	96	96	120	150
Max. speed*	r.p.m.	8000	5000	4500	3800	3000	2200	1800
Weight (plain back without top jaws)	kg	4.5	15	27	41	66	115	196
Moment of inertia	kg·m <sup>2</sup>	0.015	0.06	0.16	0.34	0.83	2.3	7
Recommended actuating cylinders		SIN-S 70	SIN-S 85	SIN-S 100	SIN-S 125	SIN-S 125	SIN-S 150	SIN-S 150-175

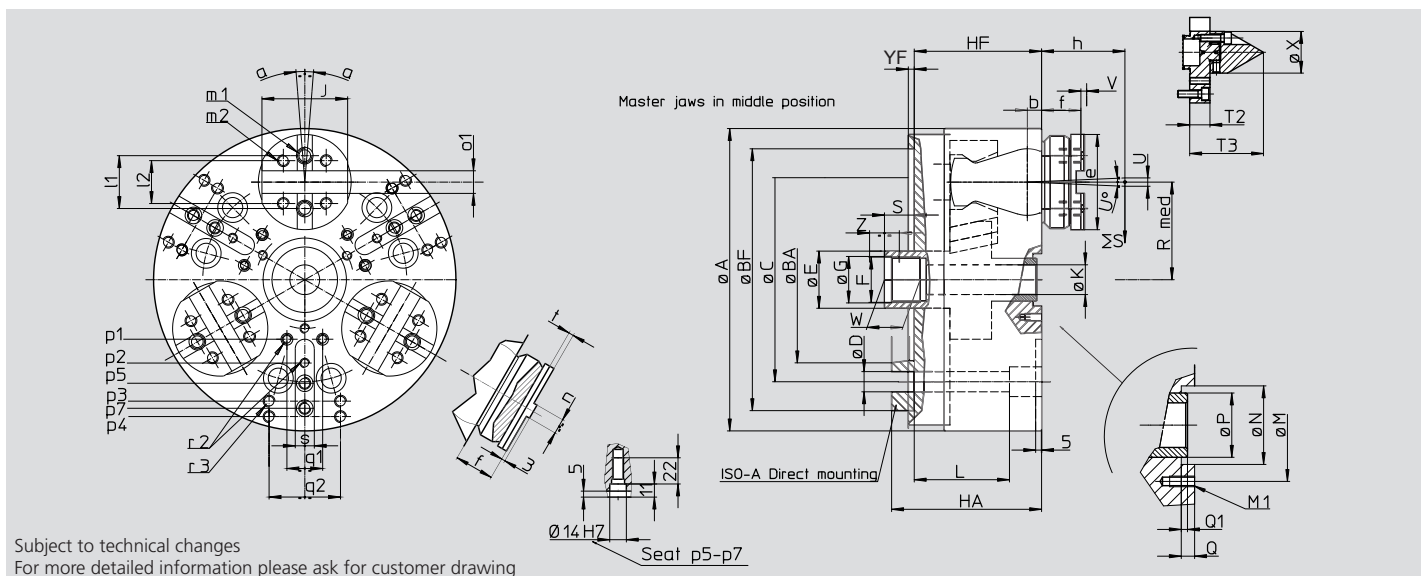
\*The above maximum speed is allowed with standard weight/height top jaws and applying the full draw pull only. For more informations please contact SMW-AUTOBLOK.



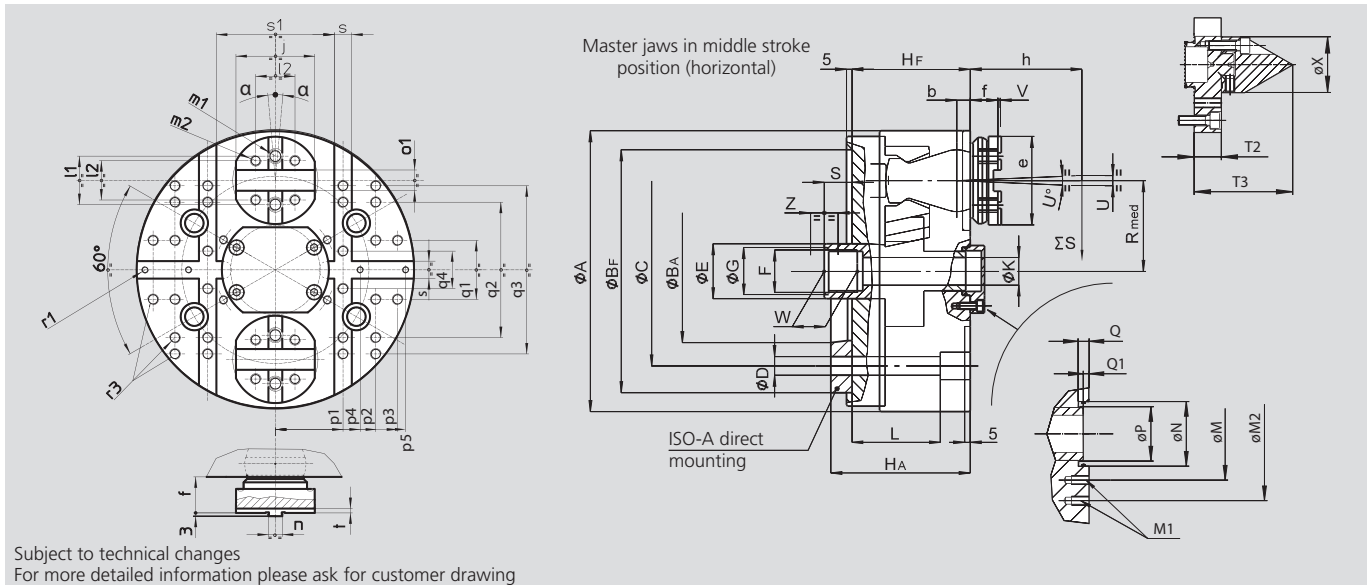
Subject to technical changes  
For more detailed information please ask for customer drawing

SMW-AUTOBLOK Type	TSF-C 135 TSR-C 135		TSF-C 170 TSR-C 170				TSF-C 210 TSR-C 210		TSF-C 250 TSR-C 250		TSF-C 315 TSR-C 315		TSF-C 400 TSR-C 400		TSF-C 530 TSR-C 530		TSF-C 650 TSR-C 650			
	Z115	A4	Z140	A5	Z160	A6	Z170	A6	Z220	A8	Z220	A8	Z300	A11	Z380	A15	Z380	A15		
<b>Mounting</b>																				
<b>A</b>	mm	135	173				212		254		315		390		535		650			
<b>BF/BA H6</b>	mm	115	63.513	140	82.563	160	106.375	170	106.375	220	139.719	220	139.719	300	196.869	380	285.775	380	285.775	
<b>C</b>	mm	82.6		104.8		133.4		133.4		171.4		171.4		235		330.2		330.2		
<b>D</b>	mm	11		11.5		13.5		13.5		17		17		21		25		25		
<b>E</b>	mm	25			36		38		48		48		75		75		100			
<b>F</b>	mm	M20 x 1.5		M28 x 1.5				M32 x 1.5		M38 x 1.5		M38 x 1.5		M60 x 1.5		M60 x 1.5		M80 x 2		
<b>G H8</b>	mm	20.5		29				33		39		39		61		61		81		
<b>Hf/HA</b>	mm	64.5	72.5	83	98	83	100	100	117	107	126	107	126	127	148	132	155	155	178	
Through-hole	<b>K</b>	mm	8.3	14				18		25		25		52		52		75		
	<b>L</b>	mm	37	56				82		80		80		74		77		97		
	<b>M</b>	mm	41	36				42		63		63		90		90		128		
Thread/depth	<b>M1</b>	mm	M4/9		M5/13				M6/11		M6/12		M6/12		M8/17		M8/17		M8/17	
	<b>N H8</b>	mm	20		28				34		44		44		75		75		150	
	<b>P</b>	mm	16		23				28.5		37		37		66		66		101	
	<b>Q</b>	mm	6		6				5.5		7.5		7.5		9		9		19	
At middle stroke	<b>Q1</b>	mm	0.5		3				2		4		4		4		4		21	
At middle stroke	<b>Rmed</b>	mm	42		55				64		82		107		130		190		245	
At middle stroke	<b>S</b>	mm	8		18				20		25		25		20		20		20	
Radial stroke	<b>T1</b>	mm	10		10				13		13		13		15		15		15	
Radial stroke (1)	<b>U</b>	mm	3.4		5.3				6.3		7		7		7.5		7.5		9.8	
Pull-down s/d (option)	<b>V</b>	mm	0.1		0.1 (0.6)				0.1 (0.6)		0.1 (0.6)		0.1 (0.6)		0.2 (0.8)		0.2 (0.8)		0.4	
	<b>W</b>	mm	17		25				25		25		25		25		25		36	
Axial wedge stroke	<b>Z</b>	mm	16		21				25		25		25		30		30		32	
Only TSF-C max.	$\alpha$	deg.	$\pm 2^\circ$		$\pm 2^\circ$				$\pm 2^\circ$		$\pm 1.5^\circ$		$\pm 1.5^\circ$		$\pm 1.5^\circ$		$\pm 1.5^\circ$		$\pm 1.3^\circ$	
	<b>b</b>	mm	5		9				10		12		12		12		12		12	
	<b>e</b>	mm	37		60				75		80		80		105		105		127	
	<b>f</b>	mm	16		27				33		33		33		32		32		46	
Reference height	<b>h</b>	mm	39		50				60		70		70		80		80		100	
	<b>j</b>	mm	36		55				65		72		72		100		100		116	
	<b>l1</b>	mm	19		32				38		44.4		44.4		63.5		63.5		63.5	
	<b>l2</b>	mm	15		24				32		36		36		48		48		54	
Thread/depth	<b>m1</b>	mm	M6/10		M10/16				M12/18		M12/18		M12/18		M16/22		M16/22		M20/26	
Thread/depth	<b>m2</b>	mm	M5/12		M8/14				M10/14		M10/14		M10/14		M12/22		M12/22		M16/24	
	<b>n h8</b>	mm	6.35		7.94				7.94		12.7		12.7		12.7		12.7		12.7	
	<b>o1 H7</b>	mm	7.94		12.68				12.68		19.03		19.03		19.03		19.03		19.03	
	<b>p1</b>	mm	-		-				30		50		60		80		(*)		(*)	
	<b>p2</b>	mm	-		35				-		70		80		110		(*)		(*)	
	<b>p3</b>	mm	-		65				80		102		102		140		(*)		(*)	
	<b>p4</b>	mm	57.5		-				-		-		135		170		(*)		(*)	
	<b>p5</b>	mm	-		-				87		87		-		-		(*)		(*)	
	<b>p7</b>	mm	57.5		-				-		108		108		-		(*)		(*)	
Thread/depth	<b>q1</b>	mm	-		-				8		30		30		36		(*)		(*)	
Thread/depth	<b>q2</b>	mm	18		36				45		60		60		80		(*)		(*)	
	<b>r2</b>	mm	-		M6/12				M6/12		M8/15		M8/15		M10/19		(*)		(*)	
	<b>r3</b>	mm	M6/14		M8/17				M8/17		M10/19		M10/19		M12/22		(*)		(*)	
	<b>s H9</b>	mm	-		16				16		16		16		20		(*)		(*)	
	<b>t</b>	mm	2.2		4				4		4		4		7		7		7	
	<b>yF</b>	mm	5		5				5		5		5		5		5		6	





SMW-AUTOBLOK Type		TSF-CP 135 TSR-CP 135		TSF-CP 170 TSR-CP 170			TSF-CP 210 TSR-CP 210		TSF-CP 250 TSR-CP 250		TSF-CP 315 TSR-CP 315		TSF-CP 400 TSR-CP 400		TSF-CP 530 TSR-CP 530		TSF-CP 650 TSR-CP 650		
Mounting		Z115	A4	Z140	A5	Z160	A6	Z170	A6	Z220	A8	Z220	A8	Z300	A11	Z380	A15	Z380	A15
A	mm	135		173			212		254		315		390		535		650		
Bf/BA H6	mm	115	63.513	140	82.563	160	106.375	170	106.375	220	139.719	220	139.719	300	196.869	380	285.775	380	285.775
C	mm	82.6		104.8			133.4		171.4		171.4		235		330.2		330.2		
D	mm	11		11.5			13.5		17		17		21		25		25		
E	mm	25		36			38		48		48		75		75		100		
F	mm	M20 x 1.5		M28 x 1.5			M32 x 1.5		M38 x 1.5		M38 x 1.5		M60 x 1.5		M60 x 1.5		M80 x 2		
G H8	mm	20.5		29			33		39		39		61		61		81		
Hf/HA	mm	64.5	72.5	83	98	83	100	100	117	107	126	107	126	127	148	132	155	155	178
Through-hole K	mm	8.3		4			12.5		25		25		52		52		75		
L	mm	37		56			82		80		80		74		77		97		
M	mm	41		36			42		82		-		90		90		128		
Thread/depth M1	mm	M4/9		M5/10			M6/11		M8/17		-		M8/17		M8/17		M8/17		
N H8	mm	30.5		28			34		70		85		75		75		150		
P	mm	25		20			28		55		55		66		66		101		
Q	mm	6		6			5.5		7.5		7.5		9		9		19		
At middle stroke Q1	mm	0.5		3			2		4		4		4		4		21		
At middle stroke Rmed	mm	42		55			64		82		107		130		190		245		
At middle stroke S	mm	8		18			20		25		25		25		20		20		
T2	mm	3.5		17			11		22		26		28		28		-		
T3	mm	22.5		62			67		68		72		95		95		-		
Radial stroke U°	deg.	5°		5.2°			5.2°		4.9°		4.9°		4.7°		4.7°		5°		
Radial stroke (1)h U	mm	3.4		5.3			6.3		7		7		7.5		7.5		9.8		
Pull-down s/d (opt.) V	mm	0.1		0.1			0.1		0.1		0.1		0.2		0.2		0.4		
W	mm	17		25			25		25		25		25		25		36		
X	mm	12		35			46		60		60		116		116		-		
Axial piston stroke Z	mm	16		21			25		25		25		30		30		32		
Only TSF-CP max. α	deg.	±2°		±2°			±2°		±1.5°		±1.5°		±1.5°		±1.5°		±1.3°		
b	mm	5		9			10		12		12		12		12		12		
e	mm	37		60			75		80		80		105		105		127		
f	mm	16		27			33		33		33		32		32		46		
Reference height h	mm	39		50			60		70		70		80		80		100		
j	mm	36		55			65		72		72		100		100		116		
l1	mm	19		32			38		44.4		44.4		63.5		63.5		63.5		
l2	mm	15		24			32		36		36		48		48		54		
Thread/depth m1	mm	M6/10		M10/16			M12/18		M12/18		M12/18		M16/22		M16/22		M20/26		
Thread/depth m2	mm	M5/12		M8/14			M10/14		M10/14		M10/14		M12/22		M12/22		M16/24		
n h8	mm	6.35		7.94			7.94		12.7		12.7		12.7		12.7		12.7		
o1 H7	mm	7.94		12.68			12.68		19.03		19.03		19.03		19.03		19.03		
p1	mm	-		-			30		50		60		80		80		(*)		
p2	mm	-		35			-		70		80		110		(*)		(*)		
p3	mm	-		65			80		102		102		140		(*)		(*)		
p4	mm	57.5		-			-		-		135		170		(*)		(*)		
p5	mm	-		-			87		87		-		-		(*)		(*)		
p7	mm	57.5		-			-		108		108		-		(*)		(*)		
Thread/depth q1	mm	-		-			8		30		30		36		(*)		(*)		
Thread/depth q2	mm	18		36			45		60		60		80		(*)		(*)		
r2	mm	-		M6/12			M6/12		M8/15		M8/15		M10/19		(*)		(*)		
r3	mm	M6/14		M8/17			M8/17		M10/19		M10/19		M12/22		(*)		(*)		
s	mm	-		16			16		16		16		20		(*)		(*)		
t	mm	2.2		4			4		4		4		7		7		7		
yF	mm	5		5			5		5		5		5		5		6		



SMW-AUTOBLOK Type			TSF-CP 170		TSF-CP 210		TSF-CP 250		TSF-CP 315	
Mounting			Z140	A5	Z170	A6	Z220	A8	Z220	A8
	<b>A</b>	mm	173		212		254		315	
	<b>Bf/BA</b>	H6 mm	140	82.563	170	106.375	220	139.719	220	139.719
	<b>C</b>	mm	104.8		133.4		171.4		171.4	
	<b>D</b>	mm	11.5		13.5		17		17	
	<b>E</b>	mm	36		38		48		48	
	<b>F</b>	mm	M28 x 1.5		M32 x 1.5		M38 x 1.5		M38 x 1.5	
	<b>G</b>	H8 mm	29		33		39		39	
	<b>HF/HA</b>	mm	83	98	100	117	107	126	107	126
Through-hole	<b>K</b>	mm	14		18		25		25	
	<b>L</b>	mm	56		82		80		80	
	<b>M</b>	mm	54		63		82		82	
Thread/depth	<b>M1</b>	mm	M8/16		M8/16		M8/16		M8/16	
	<b>M2</b>	mm	-		90		110		110	
	<b>N</b>	H5 mm	35		42		70		70	
	<b>P</b>	mm	30.2		36.5		56		56	
	<b>Q</b>	mm	6		7.5		7.5		7.5	
At middle stroke	<b>Q1</b>	mm	3.2		2.5		4.5		4.5	
At middle stroke	<b>Rmed</b>	mm	55		64		82		107	
At middle stroke	<b>S</b>	mm	18.2		20.5		25.5		25.5	
	<b>T2</b>	mm	17		21		22		22	
	<b>T3</b>	mm	62		67		68		68	
Radial stroke	<b>U°</b>	deg.	5.2°		5.2°		4.9°		4.9°	
Radial stroke (1) h	<b>U</b>	mm	5.3		6.3		7		7	
Pull-down s/d (option)	<b>V</b>	mm	0.1		0.1		0.1		0.1	
	<b>W</b>	mm	25		25		30		30	
	<b>X</b>	mm	35		42		60		60	
Axial piston stroke	<b>Z</b>	mm	21		25		25		25	
	<b>a</b>	deg.	±2°		±2°		±1.5°		±1.5°	
	<b>b</b>	mm	9		10		12		12	
	<b>e</b>	mm	60		75		80		80	
Reference height	<b>f</b>	mm	27		33		33		33	
	<b>h</b>	mm	50		60		70		70	
	<b>j</b>	mm	55		65		72		72	
	<b>l1</b>	mm	32		38		44.4		44.4	
	<b>l2</b>	mm	24		32		36		36	
Thread/depth	<b>m1</b>	mm	M10/16		M12/18		M12/18		M12/18	
Thread/depth	<b>m2</b>	mm	M8/14		M10/14		M10/14		M10/14	
	<b>n</b>	h8 mm	7.94		7.94		12.7		12.7	
	<b>o1</b>	H7 mm	12.68		12.68		19.03		19.03	
	<b>o2</b>	h7 mm	9		9		12		12	
	<b>p1</b>	mm	50		55		62		62	
	<b>p2</b>	mm	66		80		92		92	
	<b>p3</b>	mm	78		95		112		122	
	<b>p4</b>	mm	60		55		62		62	
	<b>p5</b>	mm	80		80		92		92	
	<b>q1</b>	mm	30		30		54		54	
	<b>q2</b>	mm	84		110		128		128	
	<b>q3</b>	mm	-		-		-		202	
	<b>q4</b>	mm	20		30		54		54	
Thread/depth	<b>r1</b>	mm	M6/14		M6/14		M6/14		M6/14	
Thread/depth	<b>r3</b>	mm	M8/16		M8/17		M10/18		M10/18	
	<b>s</b>	H6 mm	16		16		16		16	
	<b>s1</b>	k5 mm	84		94		108		108	
	<b>t</b>	mm	4		4		4		4	

(1) Calculated at **h** distance from the chuck's face (where normally the clamping takes place)