

TSF-CP

Compensating
Floating jaws

Compensating pull-down chuck \varnothing 170 - 315 mm

- Active pull-down
- Tongue & groove
- 2 jaws

Application/customer benefits

- Clamping of rectangular or irregular shaped shafts or clamping of shafts or chuck parts where the reference is not the O.D. but a center or a centering diameter
- A center point or a centering insert will center the workpieces and the jaws will clamp compensating and actively pull the workpiece down to the datum

Technical features

- 2-jaw design
- Active pull-down
- Compensating clamping
- Floating base jaws for 4 point contact
- Centrifugal force compensation
- TONGUE & GROOVE base jaws
- Permanent grease lubrication
- **proofline® chucks** = fully sealed - low maintenance

Standard equipment

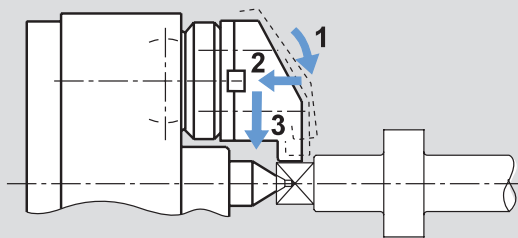
2-jaw chuck
Mounting bolt

Ordering example

2-jaw chuck TSF-CP 210 / A6



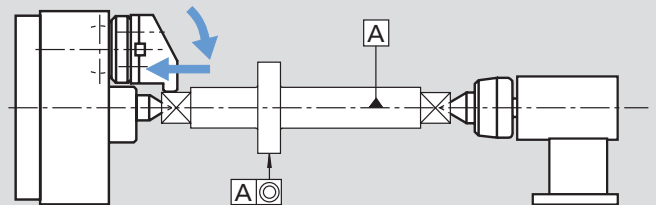
TSF-CP



Principle of function:

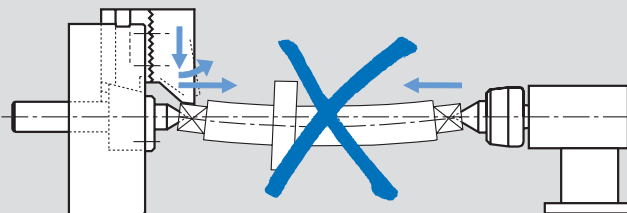
- 1 compensating pre-clamping - 2 active pull-down - 3 clamping

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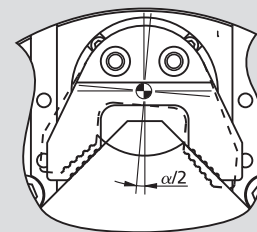
- The workpiece is actively pulled down to the center point. The tailstock just supplies the necessary force to support the workpiece. The result is an exact cylindrical and straight workpiece.

Non active pull down compensating chuck



- The workpiece is lifted by the jaws from the center point. When a higher tailstock force is applied for compensation, the workpiece will be bent.

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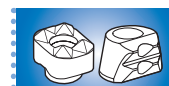
Floating jaws

Technical data

SMW-AUTOBLOK Type		TSF-CP 170	TSF-CP 210	TSF-CP 250	TSF-CP 315
Angular jaw stroke U°	deg.	5.2°	5.2°	4.9°	4.9°
Radial jaw stroke at distance h	mm	5.3	6.3	7	7
Pull down movement (standard)	mm	0.1	0.1	0.1	0.1
Axial piston stroke	mm	21	25	25	25
Compensation (on the dia.) at distance h	mm	± 1.5	± 1.5	± 2.5	± 2.5
Max. draw pull**	kN	12	17	27	27
Max. gripping force at distance h^{**}	kN	30	40	64	64
Max. speed*	r.p.m.	5000	4500	3800	3000
Weight (plain back without top jaws)	kg	15	27	41	66
Moment of inertia	kg·m ²	0.06	0.16	0.34	0.83
Recommended actuating cylinders	Type	SIN-S 70	SIN-S 85	SIN-S 100	SIN-S 100
Id. No. TSF-CP (center mounting)		77190917	77190921	77190925	77190931

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

** For internal clamping reduce the draw pull by 30%.



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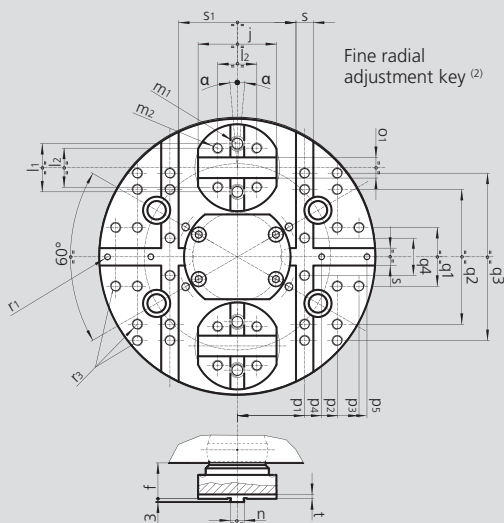
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Compensating pull-down chuck Ø 170 - 315 mm

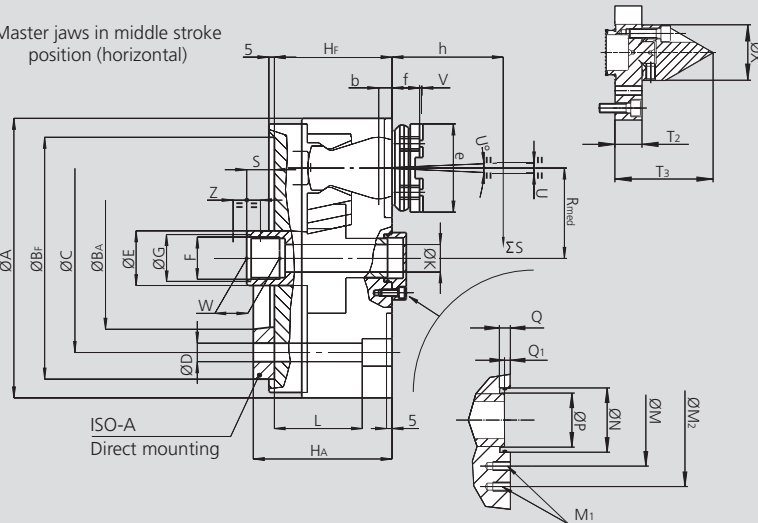
TSF-CP

- Active pull-down
- Tongue & groove
- 2 jaws

Compensating
Floating jaws



Master jaws in middle stroke position (horizontal)



Subject to technical changes.
For more detailed information please ask our customer service.

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

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

(2) SMW-AUTOBLOK 192: General catalog.