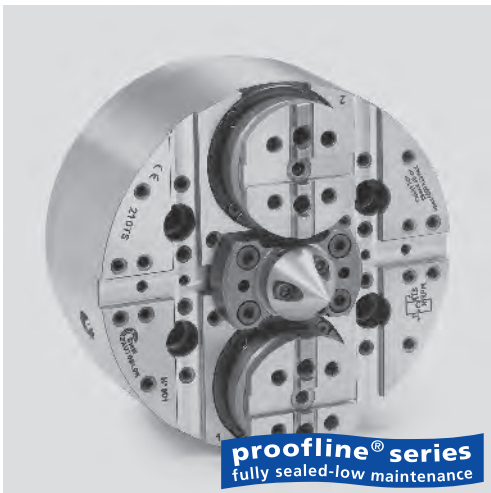


# TSF-CP

Compensating  
Floating jaws

## Compensating pull-down chucks $\varnothing$ 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 dia.
- 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

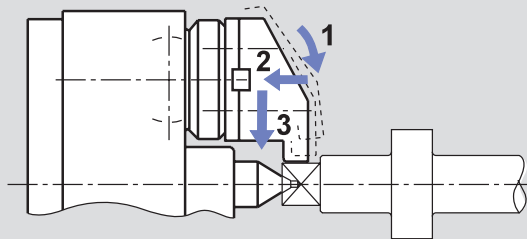
### Standard equipment

2-jaw-chuck  
mounting bolts and grease gun

### Ordering example

TSF-CP 210/A6

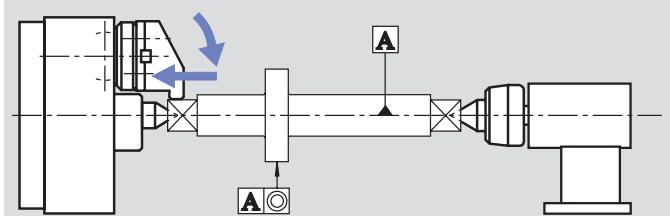
### TSF-CP



Principle of function:

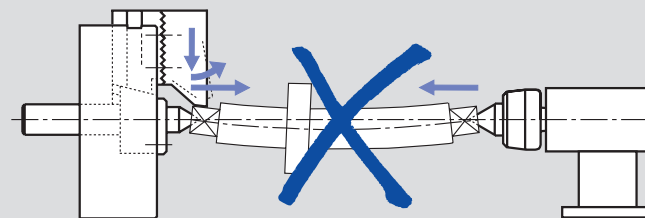
- 1 compensating pre-clamping - 2 active pull-down - 3 clamping

### TSF-CP



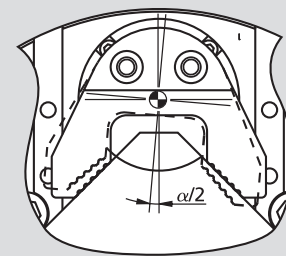
- The workpiece is actively pulled down to the center point. The tailstock just supplies the necessary force to support the workpiece. The result is an exact cylindrical and straight workpiece.

### 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.

### TSF-CP

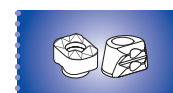


floating jaws

## Technical data

SMW-AUTOBLOK Type		TSF-CP 170	TSF-CP 210	TSF-CP 250	TSF-CP 315
Angular jaw stroke	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 (m·r <sup>2</sup> )	kg·m <sup>2</sup>	0.06	0.16	0.34	0.83
Recommended actuating cylinders		SIN-S 70	SIN-S 85	SIN-S 100	SIN-S 100

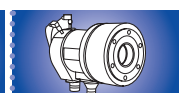
\*The above maximum speed is allowed with standard weight/height top jaws and applying the full draw pull only. For more informations please contact SMW-AUTOBLOK.



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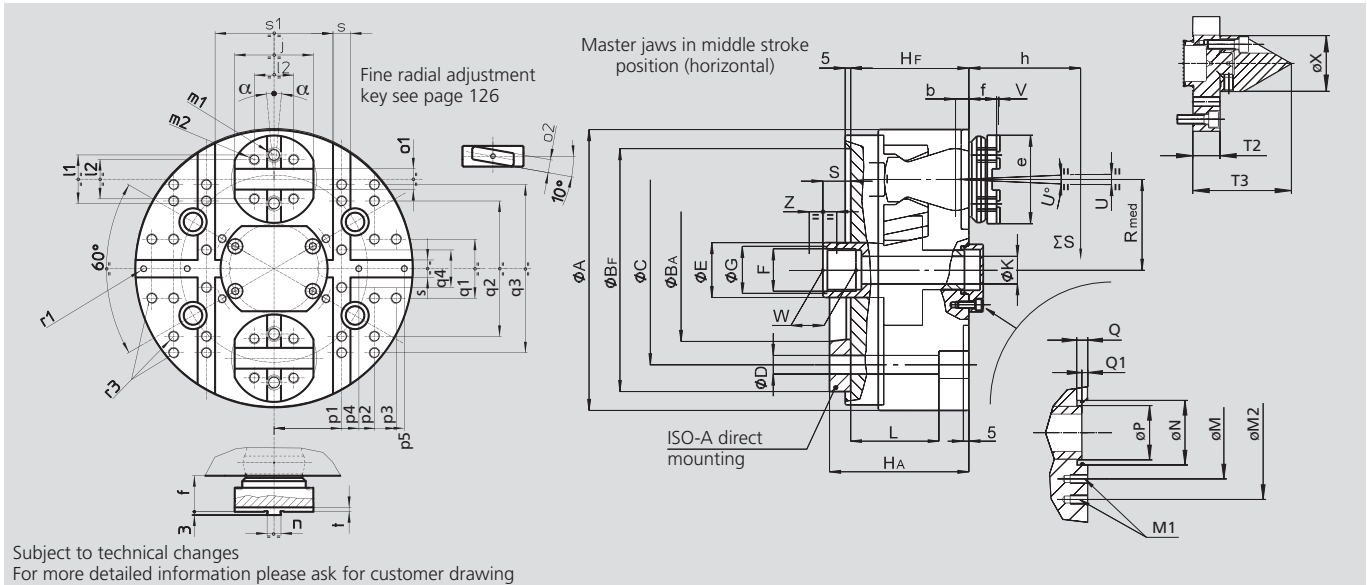
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# Compensating pull-down chucks $\varnothing$ 170 - 315 mm

# TSF-CP

- active pull-down
- tongue & groove
- 2 jaws

Compensating  
Floating jaws



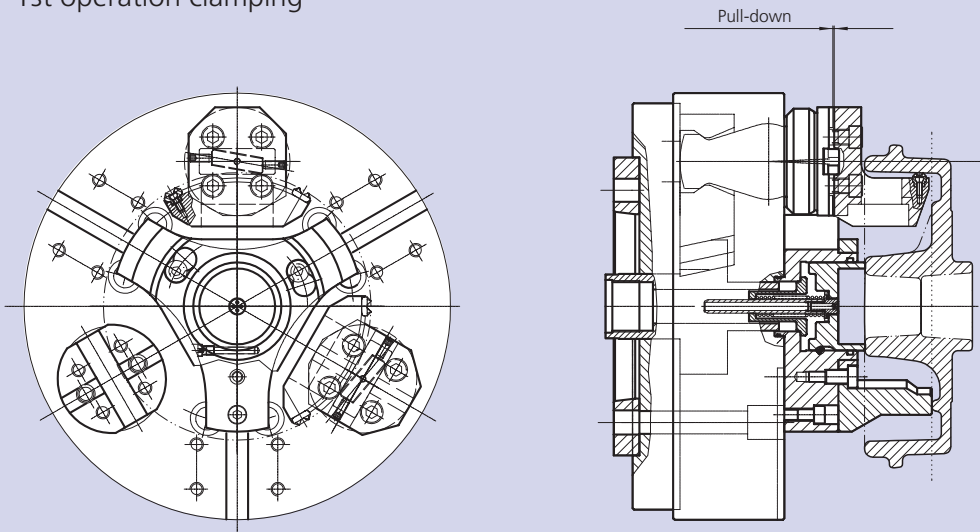
Subject to technical changes  
For more detailed information please ask for customer drawing

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
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
Through-hole	K	mm	14	18	25	25	25	25
L	mm	56	82	80	80			80
M	mm	54	63	82	82			82
Thread/depth	M1	mm	M8/16	M8/16	M8/16	M8/16		M8/16
M2	mm	-	90	110	110			110
N	H5	mm	35	42	70	70		70
P	mm	30.2	36.5	56	56			56
At middle stroke	Q	mm	6	7.5	7.5	7.5		7.5
At middle stroke	Q1	mm	3.2	2.5	4.5	4.5		4.5
At middle stroke	Rmed	mm	55	64	82	107		107
S	mm	18.2	20.5	25.5	25.5			25.5
Radial stroke	T2	mm	17	21	22	22		22
Radial stroke (1) @ h	T3	mm	62	67	68	68		68
Pull-down s/d (option)	U°	deg.	5.2°	5.2°	4.9°	4.9°		4.9°
U	mm	5.3	6.3	7	7			7
V	mm	0.1	0.1	0.1	0.1			0.1
W	mm	25	25	30	30			30
X	mm	35	42	60	60			60
Axial piston stroke	Z	mm	21	25	25	25		25
alpha	deg.	±2°	±2°	±1.5°	±1.5°			±1.5°
b	mm	9	10	12	12			12
e	mm	60	75	80	80			80
f	mm	27	33	33	33			33
Reference height	h	mm	50	60	70	70		70
j	mm	55	65	72	72			72
l1	mm	32	38	44.4	44.4			44.4
l2	mm	24	32	36	36			36
Thread/depth	m1	mm	M10/16	M12/18	M12/18	M12/18		M12/18
Thread/depth	m2	mm	M8/14	M10/14	M10/14	M10/14		M10/14
n	h8	mm	7.94	7.94	12.7	12.7		12.7
o1	H7	mm	12.68	12.68	19.03	19.03		19.03
o2	h7	mm	9	9	12	12		12
p1	mm	50	55	62	62			62
p2	mm	66	80	92	92			92
p3	mm	78	95	112	112			112
p4	mm	60	55	62	62			62
p5	mm	80	80	92	92			92
q1	mm	30	30	54	54			54
q2	mm	84	110	128	128			128
q3	mm	-	-	-	-			202
q4	mm	20	30	54	54			54
Thread/depth	r1	mm	M6/14	M6/14	M6/14	M6/14		M6/14
Thread/depth	r3	mm	M8/16	M8/17	M10/18	M10/18		M10/18
s	H6	mm	16	16	16	16		16
s1	k5	mm	84	94	108	108		108
t	mm	4	4	4	4			4

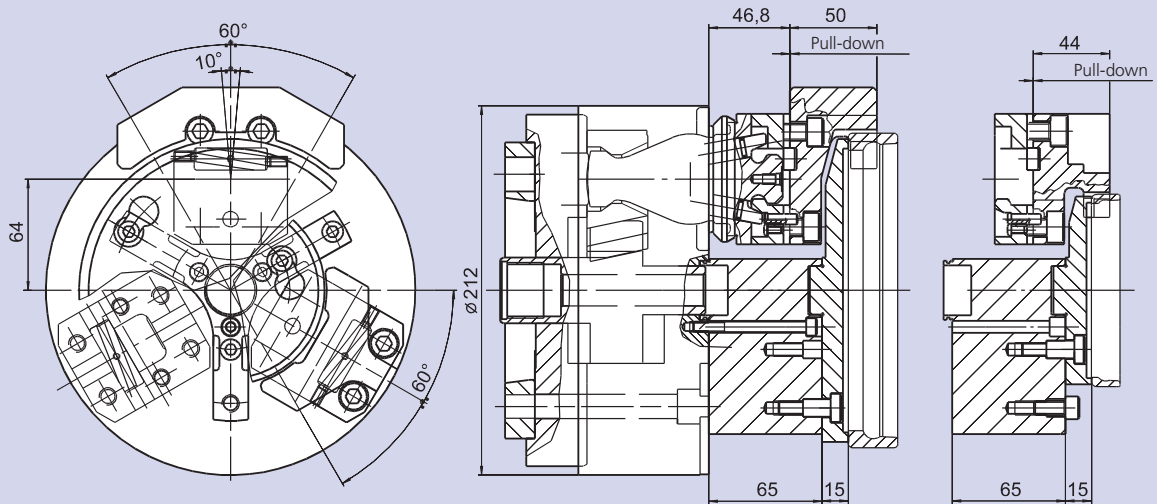
(1) Calculated at h distance from the chuck's face (where normally the clamping takes place)

Clamping examples

Brake drum – 1st operation clamping



Bearing ring – 2nd operation clamping



Bearing flange – Complete machining in one set-up

