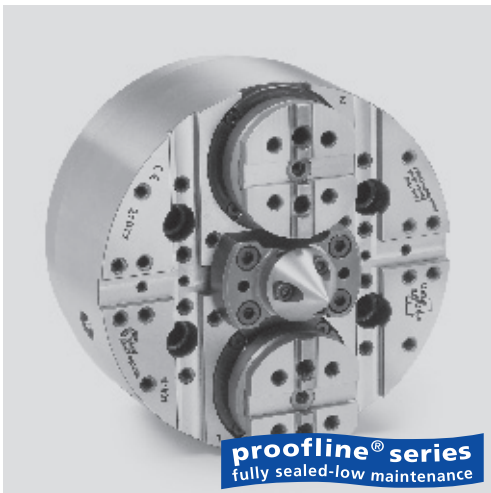


TSF-CP

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

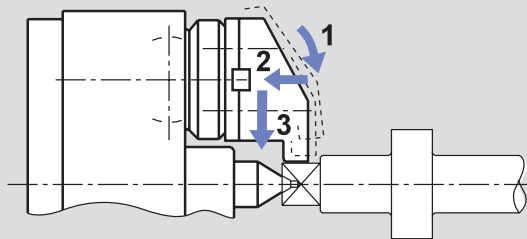
Standard equipment

2-jaw-chuck
mounting bolts and grease gun

Ordering example

TSF-CP 210/A6

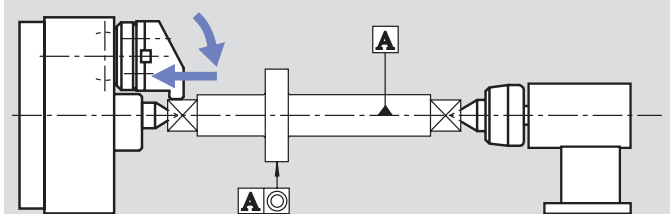
TSF-CP



Principle of function:

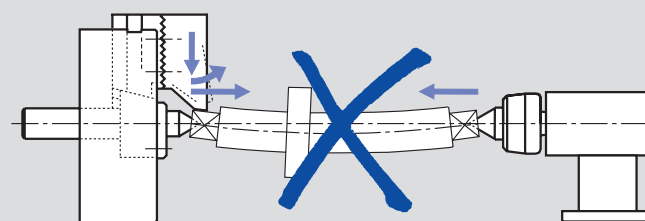
- 1 compensating pre-clamping - 2 active pull-down - 3 clamping

TSF-CP



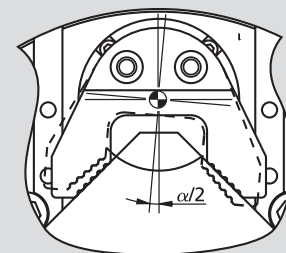
- The workpiece is actively pulled down to the center point. The tailstock just supplies the necessary force to support the workpiece. The result is an exact cylindrical and straight workpiece.

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



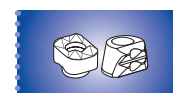
floating jaws

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	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		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.

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



Page 330



Page 324



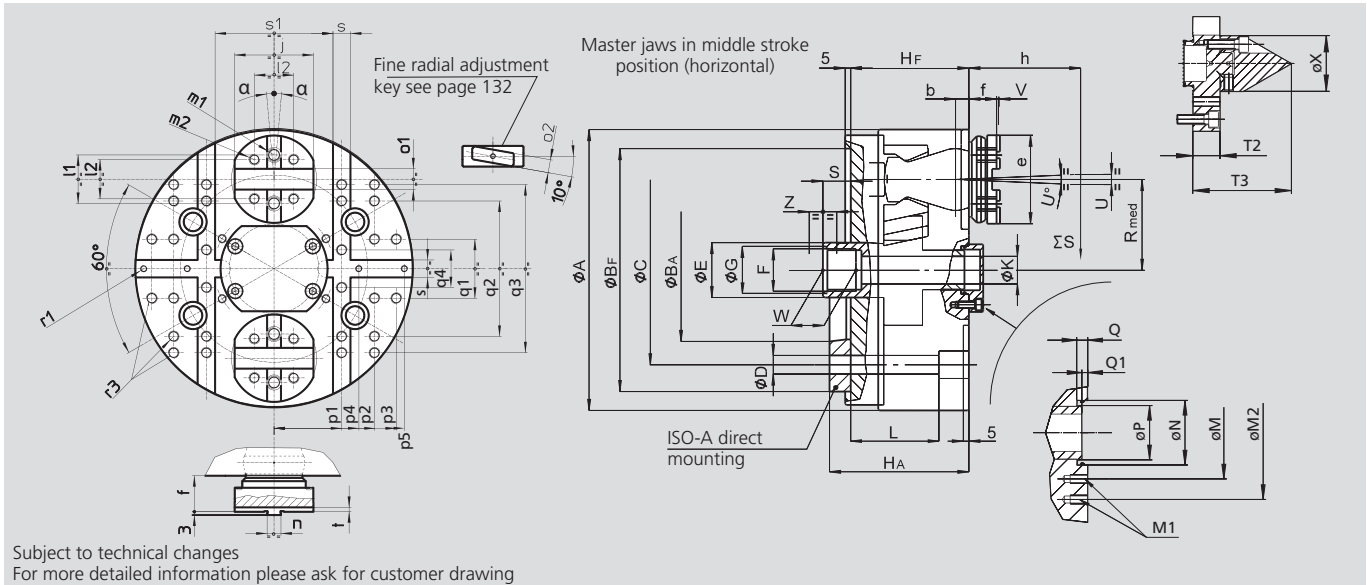
Page 225

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

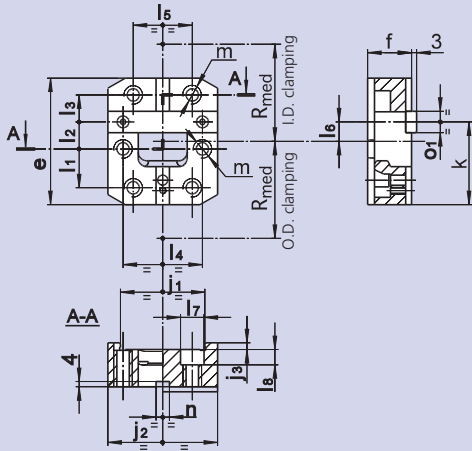
SMW-AUTOBLOK Type	TSF-CP 170		TSF-CP 210		TSF-CP 250		TSF-CP 315	
Mounting	Z140	A5	Z170	A6	Z220	A8	Z220	A8
A	mm	173	212	254	315			
Bf/BA	H6	mm	140	82.563	170	106.375	220	139.719
C	mm	104.8	133.4	171.4	171.4			
D	mm	11.5	13.5	17	17			
E	mm	36	38	48	48			
F	mm	M28 x 1.5	M32 x 1.5	M38 x 1.5	M38 x 1.5			
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
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
α	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)

Accessories for TS chucks

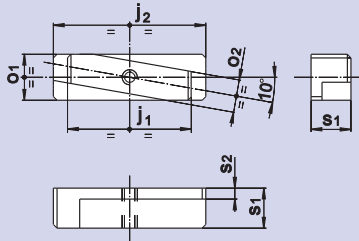
- quick jaw change pallets
- cross keys for top jaws fine adjustment

Quick change pallets for TSF-RM and TSR-RM chucks



Chuck type	170 TSF-RM 170 TSR-RM	210 TSF-RM 210 TSR-RM	250 TSF-RM 250 TSR-RM	315 TSF-RM 315 TSR-RM	400/530 TSF-RM 400/530 TSR-RM
Id. No.	19701716	19702116	19702516	19702516	19704016
e mm	60	75	80	80	105
f mm	21.5	26	28	28	34
j1 mm	44	50	55	55	80
j2 mm	55	65	72	72	100
j3 mm	3.5	4	4	4	4
k mm	39.5	49	51	51	66.5
l1 mm	19	23	22	22	28
l2 mm	12.5	16	19	19	25
l3 mm	12.5	16	19	19	25
l4 mm	42	47	52	52	74
l5 mm	32	35	40	40	62
l6 mm	9.5	11.5	11	11	14
l7 mm	11	14	14	14	17
l8 mm	7	9	9	9	11
m mm	M8	M10	M10	M10	M12
n (H7) mm	7.94	7.94	12.7	12.7	12.7
o1 (h7) mm	12.68	12.68	19.03	19.03	19.03
Rmed mm	55	64	82	107	130

Cross keys for jaw radial fine adjustment



- Inclined key for radial fine adjustment of the top jaws, used when high concentricity for second operations is required.

- Used in second operation and sometimes in first or unique operations.

Chuck Ø	170	210	250	315	400/530
Id. No.	15711633	15712133	15712533	15712533	15714033
j1 mm	24	32	38	38	46
j2 mm	38	46	56	56	70
o1 (h7) mm	12.68	12.68	19.03	19.03	19.03
o2 (h7) mm	9	9	12	12	12
s1 mm	11	11	11	11	14.5
s2 mm	3	3	3	3	4.5